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No. 1284

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MAJOR CROP PROGRESS AND WEATHER REPORTING

FIELD WORK PROGRESS, WEATHER IN SOUTHERN KAZAKHSTAN

[Editorial Report] Enterprises in southern Kazakhstan have begun sowing cereal crops. More than 7,000 units, united in komplex detachments have gone out into the fields. All crews are supplied with personnel for two shift work. This will allow sowing of the grain area twice as fast as last year--in 2 to 3 days. "Krasnaya Zvezda" a new, locally developed wheat variety is being sown. Under arid land, bogharic, conditions it yields 3 to 7 quintals per hectare more than other varieties. In the first year of the new five-year plan grain production in Chimkentskaya Oblast is projected at a record level--1,100,000 tons. [Moscow KRASNAYA ZVEZDA in Russian 10 Mar 81 p 1]

The field work is going forth successfully in Saryagachskiy Rayon, the southernmost rayon in Chimkentskaya Oblast. Following harrowing and cultivation with simultaneous application of mineral fertilizer from the air they are sowing spring crops. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 25 Mar 81 p 1]

Crop farmers in Chimkentskaya Oblast have finished spring grain crops. Only high class seed has been planted. The necessary quantity of mineral fertilizers and herbicides have been applied along with the seed. The grain area has been taken up primarily by the highest yielding wheat varieties of local selection "Krasnaya Zvezda" and "Krasnopadskaya-210." [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 4 Apr 81 p 1]

The sowing of early cereal crops is finished in the virgin land zone, the mountains of Karatau and the sand dunes of the Kyzylkum Desert. The enterprises finished in 30 hours in all. Grain fields occupy more than 10,000 hectares of reclaimed lands where not even the hardy camel's thorn grew earlier. [Moscow TRUD in Russian 4 Apr 81 p 1]

Crop farmers in Chimkentskaya Oblast have finished sowing spring crops and top dressing winter crops within the best dates. The entire wheat field is sown with local high yielding varieties. [Moscow PRAVDA in Russian 5 Apr 81 p 1; Moscow GUDOK in Russian 7 Apr 81 p 1]

Enterprises in Chimkentskaya Oblast have begun sowing cotton. This valuable technical crop has been put down on the first 7,000 hectares. In all it will occupy 125,000 hectares. Equipment operators in Chardarinskiy, Kirovskiy, Kelesskiy and several other rayons are planting at a shock work pace. The cotton growers have promised to gather 28 quintals of cotton per hectare and sell

345,000 tons to the state--5,000 tons more than the plan. Inspired by the decisions of the 26th CPSU Congress, they are full of resolve to carry through the sowing in a short time and on a high agrotechnical level in order to establish a firm base for the harvest in the first year of the five-year plan. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 Apr 81 p 1]

Cotton growers in Chimkentskaya Oblast met the spring of the first year of the new five-year plan fully prepared. At all enterprises they had prepared first class seed, equipment, mineral fertilizer and created enlarged mechanized detachments and links according to the Ipatovskiy method ahead of time. Plans and schedules were compiled with an eye to finishing planting in 8 to 10 working days.

But this spring made its own corrections. The equipment operators had not yet been able to plant cotton on the first thousands of hectares when prolonged rains set in everywhere. They had to wait for days for the soil to dry up in order to get the equipment in operation. Every hour of fair weather counted. Endurance and persistence were demanded of the equipment operators. Cotton growers in Chardarinskiy Rayon exhibited enviable mastery in an adverse situation. They were the first in Chimkentskaya Oblast to finish planting. They spent 10 days on the primary job and 2 days on secondary sowing of a certain portion of the cotton.

Cotton growers in Kelesskiy Rayon are nearly finished planting cotton. They have already put the valuable technical crop down on 8,500 hectares.

At enterprises in Dzhetysayskiy, Pakhtaaral'skiy and several other rayons the work pace is picking up. Mineral fertilizers and herbicides are being applied along with the seed in the rows everywhere. Over significant areas the planting is by the wide row method with denuded seed.

The cotton growers in Chimkentskaya Oblast have promised to gather 28 quintals of cotton per hectare and to sell 345,000 tons to the state. All efforts and thoughts of the crop farmers have been subordinated to this goal. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 25 Apr 81 p 1]

Crop farmers in Chimkentskaya Oblast finished planting cotton 5 days ahead of the plan. This was made possible by group utilization of equipment and two shifts of operators. The arable land has been washed, watered and planed. The seed was embedded in the soil with mineral fertilizers and herbicides with the help of precision seed drills. The covering the embedded seed with a layer of pulverized humus is being widely practiced. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 5 May 81 p 1]

Crop farmers in Chimkentskaya Oblast are giving the crops thorough care. They have finished top dressing winter crops on the entire area of 375,000 hectares. They have applied a full dose of nitrogen fertilizer, which under local conditions guarantees an added yield of 5 and more quintals of wheat per hectare. The top dressing has accelerated crop growth. The wheat has begun to ear much earlier than last year.

The crop farmers have been watering the fields and are treating the cereal crops with special preparations to improve grain quality. [Moscow IZVESTIYA in Russian 8 May 81 p 1]

This winter in southern Kazakhstan was a warm one without much snow. Reclamation workers in Dzhambulskaya Oblast skillfully utilized these conditions. They collected water in ponds and large reservoirs. Now they are cleaning the silt and the vegetation out of the ditches and canals. Irrigation is in progress on almost 90,000 hectares.

"We are well supplied with good seed for grain and row crops and well prepared for sowing, however we are still not complacent," says head of the agricultural section for Dzhambulskiy Obkom U. Baygel'diyev. "We have taken the lagging enterprises under special control. With the help of specialists we are working out concrete measures for increasing yields."

Bringing up the lagging enterprises is the most significant barrier to getting many tens of thousands more tons of grain and sugar beets. It is necessary to be more exacting with leaders and specialists at such enterprises. There are in Dzhambulskaya Oblast more than a dozen enterprises where grain yields on irrigated lands are less than others on bogharic land. It is even worse with the transition to scientifically based crop rotations. They are not implemented at half the enterprises.

The Dzhambulskaya Oblast crop farmers have begun sowing. They are striving to carry through the field work at the best dates and to make a worthy contribution to the fulfillment of the decisions of the 26th CPSU Congress. [Moscow PRAVDA in Russian 17 Mar 81 p 1]

Spring is coming into its own in the south of Kazakhstan. Only recently snow lay on the fields and today tractors are working there. Sowing is going forth full steam in Dzhambulskaya Oblast. This year grain crops will be sown on 229,000 hectares. Crop farmers are resolved to get 15 quintals of grain per hectare and sell 420,000 tons of grain to the state. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 20 Mar 81 p 1]

Maneuvering of the equipment and widespread application of complexes and detachments helped the enterprises in Lugovskiy Rayon, Dzhambulskaya Oblast, ahead of the projected schedule. Crop farmers in Merkenskiy and other rayons are also finishing sowing. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 1 Apr 81 p 1]

Crop farmers in Dzhambulskaya Oblast sowed the grain crops in 8 working days just as they had planned. The compressed dates for field work will guarantee the conservation of moisture in the land, which is in a deficit situation after winter without much snow. This will help soften the effect of summer drought and provide an additional 2 to 3 quintals of grain per hectare. Skillful maneuvering of the equipment has accelerated the pace. At night all tractors go over to sealing in moisture. In southern Kazakhstan such a measure prevents it from evaporating and promises a great saving of time. [Moscow TRUD in Russian 3 Apr 81 p 1]

It seems it was quite recently that the sowing of grain crops was completed on the fields of Dzhambulskaya Oblast. And today the planting units are again moving across the fields. Beet seed is being planted. More than 37,000 hectares are being planted to this crop this year. In order to fulfill the socialist pledge taken for this year to harvest 1,250,000 tons of sugar beets collectives of complexes, detachments and links are utilizing every hour with maximum effectiveness and widely applying leading labor measures.

The sugar beet seed is in the warm ground. The field work front is expanding on the fields of Dzhambulskaya Oblast. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 9 Apr 81 p 1]

Sugar beets in Dzhambulskaya Oblast have been sown on more than 15,000 hectares in all. Agricultural workers in Dzhambulskaya Oblast have set the goal of gathering 1,200,000 to 1,300,000 tons of sugar beets this year. [Moscow SEL'SKAYA ZHIZN' in Russian 11 Apr 81 p 1]

The even emergence of sugar beet shoots on the fields of Dzhambulskaya Oblast has made it possible to quickly begin mechanized blind cultivation and diagonal harrowing. This will guarantee getting no less than 350 quintals of sugar beets per hectare. [Moscow SEL'SKAYA ZHIZN' in Russian 16 May 81 p 1]

Crop farmers have begun large-scale planting of potatoes in the Chingil'dinskiy Oasis, which was created in the semidesert lands in the southern Lake Balkhash area. Favorable climatic conditions--early thawing of the snow, rapid warming of the soil and an abundance of water allowed the conversion of these lands into a major potato growing area. Here they have established new specialized enterprises and expanded potato growing areas.

They have planted 1,100 hectares to this valuable food crop. The arable lands have been nourished with mineral fertilizers. An average of 200 kilos per hectare of a mixture of nitrogen, phosphorous and potassium fertilizers have been applied. The high yielding regionally designated varieties "Berlikhingen", "Iskra" and "Ogonek" have been planted.

Thanks to the Chingil'dinskiy Oasis and also to the creation of four specialized mountain sovkhozes in Narynkol'skiy Rayon potato production in Alma-Atinskaya Oblast has grown by a third in recent years. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 1 Apr 81 p 1]

The planting of early potatoes is finished on 1,107 hectares in Alma-Atinskaya Oblast. Seed of the high yielding varieties "Berlikhingen", "Priyekul'skiy Ranniy", "Iskra" and "Ogonek" has been put down at the best sowing dates. The abundance of warmth and water allows the gathering of 100 and more quintals of potatoes per hectare as early as June. The crop farmers have resolved to produce 10,000 tons of early potatoes--half again the plan. The fields have been nourished with fertilizer, and almost completely sprinkled with herbicides.

Specialized enterprises growing medium and late ripening potatoes have gotten involved in planting. Sufficient seed of regionally recommended varieties has been provided. The fields have been top dressed with humus and mineral fertilizers. More than a third of the area has been allotted to mountain potatoes, suitable for long-term storage. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 25 Apr 81 p 1]

Sowing of cereals is finished in the vallies of the Zaili Alatau in Alma-Atinskaya Oblast. Almost a thousand mighty Kirovets tractors with five to six anti-erosion seed drills each were utilized with the maximum load. This made possible the putting down of seed into the soil at the best agrotechnical dates and with high quality. Mineral fertilizers have been applied over large stretches. In the semidesert zone grain crops will develop under the protection of windbreaks of grass. The mountain enterprises have joined in the sowing campaign. [Moscow TRUD in Russian 2 Apr 81 p 1]

The cultivation of sugar beets in Alma-Atinskaya Oblast is going over to an industrial base. Crop farmers in the oblast have begun large-scale planting of this valuable technical crop.

"We became convinced of the advantages of the industrial method last year," says Kazakhstan Agriculture Minister M. Motoriko. "Where it has been implemented the yield was 20 and more percent higher than usual."

In Kazakhstan the concentration and specialization of sugar beet raising is continuing. About 100 enterprises are engaged in sugar beet raising. Sugar beets will occupy more than 76,000 hectares this year. The goal of the crop farmers is to give 2,445,000 tons of sugar beets to the state--200,000 tons more than last year. [Moscow SEL'SKAYA ZHIZN' in Russian 7 Apr 81 p 1]

The crop farmers in Kazakhstan finished planting sugar beets yesterday. The valuable technical crop has been planted on 77,000 hectares at specialized enterprises in Dzhambulskaya, Taldy-Kurganskaya and Alma-Atinskaya Oblasts. Along with seed fertilizer has been put down in the rows. Shoots have already appeared on most fields. The beet growers have promised to sell almost 2,500,000 tons of sugar beets to the state--much more than called for by the plan. [Moscow TRUD in Russian 24 Apr 81 p 1]

Equipment operators in Taldy-Kurganskaya Oblast have sown grain on the first tens of thousands of hectares. Over 5,000 have already been taken out into the fields. Work is going forth in two shifts. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 1 Apr 81 p 1]

Enterprises in Taldy-Kurganskaya Oblast began planting sugar beets yesterday. Graded seed of regionally recommended varieties are being placed on the fields after the better predecessors. The soil has already been nourished with mineral and organic fertilizers--an average of 40 to 50 tons per hectare. At all enterprises the industrial technology for raising sugar beets is being implemented. [Moscow TRUD in Russian 2 Apr 81 p 1]

Equipment operators in Karatal'skiy Rayon were the first in Taldy-Kurganskaya Oblast to finish planting sugar beets. Seed was put down on 2,000 hectares in 4 days.

Following the southern rayons planting units have gone out into the fields in Aksuskiy, Alakul'skiy and Sarkandskiy Rayons. The valuable technical crop is already planted on 18,000 hectares--half the area to be planted. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 14 Apr 81 p 1]

Beet growers in Taldy-Kurganskaya Oblast have finished planting this valuable technical crop over the entire area of 36,000 hectares. [Moscow TRUD in Russian 22 Apr 81 p 1]

The rice growers in Karatal'skiy Rayon, Taldy-Kurganskaya Oblast, the northernmost rice growing zone in Kazakhstan have begun the sowing campaign in a well organized manner. Following the Ipatovskiy method, they attained a high pace from the first days and are striving not to permit an excessive gap between pre-sowing tillage of the soil and covering over of the seed.

Involved in competition for further increase in production effectiveness, rice growers in the Karatal' Valley serve as examples of highly productive utilization of equipment. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 22 Apr 81 p 1]

Crop farmers in the Karatal' Valley in Taldy-Kurganskaya Oblast have begun sowing rice. The moisture loving crop is being put down after good predecessors, primarily alfalfa. The soil has been nourished with organic and mineral fertilizers. The regionally recommended local varieties "Ushtobinskiy" and "Alakul'skiy" are being sown. They are distinguished by early ripening.

The rice growers are striving to finish sowing in 100 to 120 hours. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 29 Apr 81 p 1]

The sowing campaign is gathering steam at enterprises in Taldy-Kurganskaya Oblast. There are several soil-climatic zones here. Each of these has its own field work dates. On the wide open steppes the sowing of grains and grasses is coming to an end. Enterprises in Kirovskiy Rayon finished sowing in 2 to 3 days. Grain was sown on an area of 24,000 hectares, while the plan called for 22,000 hectares. The above plan sowing was accomplished by plowing up additional land. In the mountain and foothill zones of Taldy-Kurganskaya Oblast the snow has just melted away, field work is going forth selectively as the soil warms up.

In the first year of the 11th Five-Year Plan rural workers in Taldy-Kurganskaya Oblast should sell 450,000 tons of grain, 1,052,000 tons of sugar beets, 34,800 tons of potatoes, and 80,100 tons of vegetables. Now they are making every effort to carry out the whole complex of tasks in creating a reliable base under the new harvest quickly and well.

Spring came unusually early, supplies of moisture in the soil low. Therefore equipment operators must value every hour. Compared with last year anti-erosion agrotechnology and the Ipatovskiy method have wider application in Taldy-Kurganskaya Oblast. Equipment operators' work has been organized into two shifts everywhere. By night the pre-sowing tillage of the soil goes forth and by day the sowing.

"At the 15th congress of the Communist Party of Kazakhstan our oblast was subjected to justifiable criticism in grain economy and beet raising," says head of the oblast agricultural board M. S. Sergazin. "From this criticism the appropriate conclusion was drawn. To increase the effectiveness of mineral fertilizer utilization it is applied simultaneously with the sowing of the grain. We are applying much more organic fertilizer."

But crop farmers in Taldy-Kurganskaya Oblast have not been able to eliminate the shortcomings fully. The lag in mineral top dressing of winter crops and perennial grasses is causing serious alarm. At the present time only 52,000 hectares of the 217,000 hectares of grain crops have been top dressed. Last fall was dry. Winter crops did not even come up on almost half the area. But in the spring the situation improved markedly. There was time left to top dress the fields with nitrogen fertilizers. However the leadership and the specialists at the oblast "Sel'khozkhimiya" association did not show concern, did not trouble themselves in a timely manner about fertilizer delivery and in fact disrupted fulfillment of this most important agrotechnical measure. The grain growers in Taldy-Kurganskaya Oblast are right to demand more responsibility for the harvest from "Sel'khozkhimiya" association workers. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 5 Apr 81 p 1]

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MAJOR CROP PROGRESS AND WEATHER REPORTING

AGRICULTURAL WORK PROGRESS AND WEATHER CONDITIONS IN NORTHERN KAZAKHSTAN

[Editorial Report] Moscow TRUD in Russian 13 May 81 page 2 reports that crop farmers in Pavlodarskaya Oblast yesterday began large scale sowing of millet. A quarter million hectares are sown to this groat crop every year. A soil protection system of cropping, which is being implemented everywhere is making possible a growth in productivity in the arable land. Enterprises in Aktyubinskaya, Kustanayskaya and Semipalatinskaya oblasts have also begun sowing millet.

Moscow TRUD in Russian 19 May 81 page 2 states that the wide open spaces of the Virgin Lands have been filled with the roar of engines--the large-scale sowing of wheat, barley and other cereal crops has begun. The April and May rains have minimized the consequences of the winter without much now--there is sufficient moisture in the soil. The Virgin Land crop farmers performed a complex of spring tillage operations in the fields in an extremely short time.

For many years in Fedorovskiy Rayon, Kustanayskaya Oblast, they made use of standard factory model seed resuppliers. And during sowing the units stood around frequently and for a long time--resupply could not be guaranteed. Then the skilled rural workers found an original solution: they began to utilize large capacity ZIL dump trucks as seed resuppliers. On board the machines they installed worm type transporters taken from worn out combines. Such resuppliers handle over two times more grain than the standard factory models. There is now no equipment standing around.

Grain growers in other oblasts are not lagging behind those in Kustanayskaya Oblast. Almost everywhere they are sowing 1,500 to 2,000 hectares a day, almost twice the norm.

The increased exactingness in the quality of spring field work of of this spring--special workers' commissions check the sown areas. If bad workmanship is discovered, it is suggested that the equipment operators immediately resow the field.

The excellent condition of the equipment and skill of rural workers are making the successful conduct of field work possible.

Moscow TRUD in Russian 23 May 81 page 1 reports the sowing campaign on the Kazakhstan Virgin Lands, the grain area of which exceeds 16,000,000 hectares, is going forth around the clock. Yesterday the crop farmers began putting seed into the soil on the sixteen million hectares. Counteracting the bad weather with mastery and skillful maneuvering of the equipment, many enterprises are significantly ahead of the sowing schedule. Equipment operators in Kokchetavskaya, Tselinogradskaya and Pavlodarskaya Oblasts are serving as examples of highly productive equipment utilization. They have already sown more than a third of the arable land intended for grain crops.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 13 May 81 page 1 notes that crop farmers in the northern oblasts of Kazakhstan have gotten involved in the battle for the harvest in the first year of the new 5-year plan. The gigantic field, in which grain alone will occupy 16,000,000 hectares, has been filled with the roar of engines of tens of thousands of tractors. Large-scale sealing in of moisture--an important link in the entire system of crop farming--has begun.

In the primary grain growing area in Kazakhstan the winter passed without much snow, but the April and May rains saturated the soil with moisture. Equipment operators are striving to preserve as much moisture as possible for the sowing campaign, which will begin in the middle of the month, at times set firmly by scientists at the All-Union Scientific Research Institute of the Grain Economy.

Units, equipped with special harrows from a complex of anti-erosion equipment are working almost everywhere around the clock.

Collectives of Virgin Land sovkhozes and kolkhozes have become convinced in practice of the high effectiveness of accelerated sealing in of moisture. There, where the anti-erosion harrows went through prior to sowing, the areas are better leveled, the structure of the arable land is improved, the stubble is fully preserved and there are far fewer weeds. And this is good for an added increment of two to three quintals of grain per hectare. The mood of the crop farmers in Kazakhstan is to strengthen and multiply this year the successes attained last year and to overfill the plan for grain sales to the state.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 22 Apr 81 page 1 states that equipment operators in the southern rayons of Aktyubinskaya Oblast have begun selective sealing in of moisture in the fields. During the first days of work harrowing went forth on more than 20,000 hectares in Temirskiy Rayon. In Isatayskiy, Oktyabr'skiy, Khobdinskiy, Chelkarskiy and Bayganinskiy rayons the arable land was tilled on an area of 50,000 hectares.

This year the enterprises significantly expanded the area under spring crops--it amounts to over 2,000,000 hectares. For sealing in moisture the sovkhozes and kolkhozes have prepared a large number of needle harrows and disk type stubble mulchers. This will allow the pre-sowing tillage of the soil to be done in 5 days.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 6 May 81 page 1 reports that Aktyubinskaya Oblast has begun sowing of early cereals. Moisture has been sealed in over broad expanses. More than 260 reinforced mechanized complexes have gone out--this is more than last year. They will sow spring crops on over 2,500,000 hectares. The primary foodcrop--wheat will occupy 1,100,000 hectares--more than projected. This is primarily medium ripening "Saratovskaya-29" and "Nakat" and the medium early "Saratovskaya-42," which given the highest yields under local conditions.

Fall tillage of winter fallow and snow retention were carried out over the entire sown area. High quality seed was laid in. About a million tons of organic fertilizer were delivered to the fields. Mineral fertilizer will be put down simultaneously with the seed on almost half a million hectares. Most enterprises are working two shifts and will finish sowing in eight to ten working days.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 Apr 81 page 1 states that air crews in Karagandinskaya Oblast have begun field work. They began chemical treating of sown areas. This year they will perform this work on an area of 710,000 hectares.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 29 Apr 81 page 1 reports work on sealing in moisture is in full swing on the fields of Karagandinskaya Oblast. Harrowing has been done on over a million hectares of arable land in Karagandinskaya Oblast.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 5 May 81 page 1 states that last year the enterprises in Kellerovskiy Rayon got the highest grain yield in Kokchetavskaya Oblast and overfilled the grain procurement plan by more than two times. This year the crop farmers are resolved to consolidate the success. They have already begun field work. They harrowed all 140,000 hectares of winter fallow on the best agrotechnical dates. A few days will pass and the sowing units will be going out onto the fields.

Moscow TRUD in Russian 16 May 81 page 1 notes that last year the grain growers in Kokchetavskaya Oblast gathered an abundant harvest. This year the crop farmers do not want to retreat from the goal they attained. They are resolved to gather no less than 3,500,000 tons of grain.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 19 May 81 p 1 reports that large-scale sowing of wheat has begun in all rayons in Kokchetavskaya Oblast. A fast pace has been attained everywhere from the first days. The crop farmers in Kokchetavskaya Oblast have been leaders in republic competition among grain growers for exemplary preparation and conduct of spring field work in the first year of the new 5-year plan. Deputy chairman of the Kokchetavskiy OBlast executive committee B.A. Koshumbayev commented on how the sowing was organized in the obalst: "...All sovkhozes and kolkhozes are now sowing the primary food crop--wheat. It will occupy 2,000,000 hectares. Barley, oats, corn and sunflowers have been put down on hundred of thousands of hectares.

"Now significantly more tractors, sowing and other units are working in the fields than last year. By the start of sowing 400 new Kirovets tractors, 3,000 anti-erosion SZS-2.1 seed drills and much other equipment had been received. And now sowing is going forth at the enterprises primarily with seed drills of this type towed by K-700 and K-701 tractors.

"Our agronomists did well in preparing the seed. There is only first and second class seed at the enterprises. What is more almost twice as much first class seed will be sown as last year. And in several rayons only first class seed will be sown. And there is one other thing. The areas being sown to the highest yielding wheat varieties "Omskaya-9," "Tselinnaya-21" and others is being expanded. Serious attention is being devoted to expansion of areas sown to pulse crops and root crops."

In Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 20 May 81 page 1, it is reported that in Kokchetavskaya Oblast 756 sowing complexes have been formed. Many enterprises are applying superphosphate along with the seed, which in favorable years gives an added yield of 2 to 3 quintals of grain per hectare. Over 90 percent of the seed in Kokchetavskaya Oblast is of first and second class.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 4 Apr 81 page 1 notes that Kustanayskaya Oblast has begun forming up about 800 detachments for spring field work. With the help of the Virgin Lands Scientific Research Institute for Mechanization and Electrification of Agriculture, variants for combining tractors with seed drills and other equipment have been worked out for each soil zone. All units for presowing tillage of the soil and sowing will be wide spanned. On the entire area--4,200,000 hectares--grain will be sown by stubble seed drills.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 5 May 81 page 1 reports that in Kustanayskaya Oblast, moisture is sealed in on 2,000,000 hectares. This work is going forth around the clock. All enterprises are utilizing wide span hitches, and are rolling the soil simultaneously with the harrowing. Scientists at the Virgin Land Institute for Mechanization and Electrification of Agriculture have worked out recommendations for the optimum amount of work during the sowing campaign for tractors of all models. Their application has significantly increased the pace of work.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 12 May 81 page 1 states that sovkhozes in Kustanayskaya Oblast have begun large-scale planting of potatoes. In a short time they must plant potatoes on 8,500 hectares. The high yielding "Lorkh" variety is the primary one planted. Workers at the oblast association "Sortsemovoshch" helped supply the sovkhozes. The prime cost of a quintal of potatoes in Kustanayskaya Oblast is usually a third lower than the plan.

Moscow SEL'SKAYA ZHIZN' in Russian 24 May 81 page 1 reports crop farmers in Kustanayskaya Oblast are sowing in a thorough, well-organized manner. The grain area amounts to 4,250,000 hectares. Wheat occupies more than 3,000,000 hectares of this. The sowing will be completed in a short time. This year, in truth, there was an interruption right at the start of the harvest. The equipment operators had not yet been able to attain the assigned work pace when on 16 May unexpected rain fell over the entire oblast, on the following day frosts gripped the soil. They had to work around the forced break. But as soon as the steppe winds dried out the land, the unit continued sowing. Every day the equipment operator force sows more than 300,000 hectares.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 14 Apr 81 page 1 notes that crop farmers in Semipalatinskaya Oblast have begun sowing spring crops. Enterprises in the southern rayons--Makanchinskiy and Urdzharskiy were the first to take their units out into the fields. Work in the fields is going forth almost around the clock. First and second class grain seed is being put down. Along with the traditional strong and durum wheat "Saratovskaya-29" and "Khar'kovskaya-46" the new high yielding varieties "Tselinnaya-21" and "Nakat" are being sown. Sub-units of "Kazsel'khozkhimiya" are making their contribution to the struggle for the grain. They have worked out recommendations for mineral fertilizer utilization for each enterprise. Enterprises in other rayons are ready to go out into the fields. More than 2,500 mechanized units will be active in the heat of the campaign on the spring crop field, which occupies 1,100,000 hectares.

It is reported in Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 12 May 81 page 1 that at the second plenum of the Central Committee of the Communist Party of Kazakhstan they spoke of the necessity for increasing the area sown to oil crops in Kazakhstan, especially in Semipalatinskaya Oblast. Measures to correct this situation are being taken to correct this situation, but by no means everywhere. Whereas last year sunflowers occupied 2,400 hectares in Zhanasemeyskiy Rayon and 3,900 hectares in Borodulikhinskiy Rayon, this year the sown areas have been significantly reduced. Certain enterprises have altogether ceased growing this crop. The sunflower is a valuable crop. But last year Semipalatinskaya Oblast did not fulfill its sunflower sales plan.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 25 Apr 81 page 1 states that crop farmers in the Irtysh River area in Semipalatinskaya Oblast have begun spring field work. Kolkhozes and sovkhozes in the southern rayons were the first to begin.

In Semipalatinskaya Oblast the spring campaign front is expanding. Along with sowing enterprises have begun caring for winter crops and grasses. They are being top dressed with mineral fertilizers from the ground and from the air.

Chief agronomist of the Semipalatinskaya Oblast agricultural board G.F. Fazylbekov discussed the struggle of the Irtysh area crop farmers for increased per hectare productivity: In the first year of the 11th Five-Year Plan the sown area in the sovkhozes and kolkhozes in Semipalatinskaya Oblast will amount to over 2,000,000 hectares, or 100,000 hectares more than last year. We expanded primarily the area sown to grain forage crops. A total of 1,545,000 hectares are being sown to spring crops. Grain growers have resolved to get not less than 10 quintals of grain per hectare and to send more than 460,000 tons of grain to the state.

"At the enterprises quite a bit of work has been done toward increasing productivity in the grain field. Almost all grain will now be sown after fallow or winter fallow. Snow retention was carried out almost everywhere. Now we must do a lot of work in spring plowing. As has already been said, we are bringing new lands into the crop rotation. Over 800 units are involved in plowing and in the next few days the number will increase to 2,400. This will allow us to prepare newly plowed up lands in time."

In the southern rayons--Makanchinskiy, Urdzharskiy and others sowing of grains, grasses and sunflowers is going forth. In the first of these 60 percent of the grain has been sown, in the second, half has been sown. The task has been set--to finish sowing by 4 or 5 May. In the remaining rayons in Semipalatinskaya Oblast the main attention is now being devoted to presowing tillage of fallow and winter fallow.

BIG-3 harrows, SZS-2.1 seed drills and other equipment which allows improvement in all tilling and sowing work are being widely employed this year.

Winter crops occupy a significant portion of the Semipalatinskaya Oblast grain area. Almost 80 percent of the winter crops will be top dressed with mineral fertilizer. This work is now going forth at enterprises in Zhanasemeyskiy, Borodulikhinskiy, Beskaragayskiy and other rayons. A quintal to a quintal and a half of nitrogen fertilizer is being applied per hectare. As the experience of past years shows this gives an added increment of 2 to 3 quintals of grain per hectare. In a work the grain growers are doing everything to grow an abundant harvest in the fist year of the new 5-year plan.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 17 Mar 81 page 1 reports that the March snow storms which occurred frequently on the fields of Severo-Kazakhstanskaya Oblast are working for the harvest. They make possible the cutting of furrows in two passes on the arable land of all of nearly 150 enterprises. They all became "snow traps." An especially large amount of snow accumulates in the tunnels formed by the DAGs.

Utilization of Kirovets tractors in the "white plowing" helped the equipment operators retain the snow twice not only on the entire grain area, but also on feed lands, fallow and lands set aside for long-term improvement. Snow has been retained on more than 4,000,000 hectares.

Moscow GUDOK in Russian 21 Apr 81 page 1 notes fertility detachments from the Severo-Kazakhstanskaya Oblast association of "Sel'khozkhimiya" have finished applying organic fertilizer for 30,000 hectares of waste land; 5 million tons of composts have been delivered to the fields. The assimilation of land of low productivity is one of the grain growers' main tasks.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 16 May 81 page 1 reports that grain growers in Severo-Kazakhstanskaya Oblast have begun sowing grain. More than 2,300 units have gone out into the fields. The majority are wide span units. Crop farmers began laying the base for the harvest last fall. They plowed the winter fallow in a timely manner, they ridged the snow twice, more than 5,000,000 tons of organic fertilizer were applied.

We are sowing on well prepared soil, which we tilled in accordance with all agrotechnical rules. Equipment operators are working throughout the daylight hours. We are applying mineral fertilizers simultaneously with the seed. Considering the mistakes of past years, we are paying special attention to seed depth. It does not exceed 6 to 7 centimeters.

As before the primary demand is for quality work. This year the equipment operators have fitted the seed drills with additional covers and compartments. Now the seed is not mixed with the fertilizer, violation of sowing and fertilizer application norms is not permitted. Furrow openers following in the tracks of the wheels of the K-700 tractors have been lengthened by 4 centimeters. An evenness in seed placement depth is achieved by this.

We have the opportunity to sow more than 120,000 hectares a day, which will allow completion of the sowing of the wheat in a high quality manner and in the best agrotechnical terms.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 25 Apr 81 page 1 states that enterprises in Vostochno-Kazakhstanskaya Oblast have begun sowing barley and wheat. They will sow more than 590,000 hectares to grain in the oblast. Winter fallow was tilled in the fall under practically the entire spring crop area. The seed is being put down into well fertilized soil. An additional 400,000 tons more humus were taken out into the fields this year than last. Mineral fertilizer is being applied everywhere upon sowing.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 5 May 81 page 1 notes that about 240 mechanized detachments are involved in field work at enterprises in Vostochno-Kazakhstanskaya Oblast. In the northern rayons they are sealing in moisture, and in the southern rayons they are finishing sowing grain. Sovkhozes and kolkhozes in Tarbagatayskiy, Zaysanskiy and Kurchumskiy rayons are finishing the sowing campaign. In Glubokskiy Rayon sowing of peas has begun.

"We are allotting 3,460 hectares for this valuable legume," says rayon agricultural board chairman D. Leyman. "We are planning to get 20.5 quintals per hectare. And our overall cereal area amounts to more than 64,000 hectares. We are counting on harvesting no less than 22 quintals of grain per hectare. We think we will finish the sowing campaign in two weeks. The work pace is fast. The Ipatovskiy method of labor organization is helping us a lot."

At the same time enterprises in Vostochno-Kazakhstanskaya Oblast are preparing to plant sunflowers. This oil crop will occupy 46,000 hectares.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 25 Apr 81 page 1 notes that enterprises in Kurgal'dzhinskiy, Krasnoznamenskiy, Atbasarskiy and other rayons in Tselinogradskaya Oblast have begun selective harrowing. Most units are working in two shifts.

CSO: 1824/273

MAJOR CROP PROGRESS AND WEATHER REPORTING

REGIONAL DATA CITED IN OVERVIEW OF SPRING FIELD WORK

Moscow SEL'SKAYA ZHIZN' in Russian 22 May 81 p 1

[Article by N. Osychkin: "Field Production Line in Operation"]

[Text] The roar of motors continues unabated, both day and night, out on the country's fields. The farmers have embarked upon a very important stage in their spring operations -- completion of the sowing work, tending the crops and creating optimum conditions for obtaining high yields on each farm. Expert work on the part of the machine operators and efficient labor organization in all sectors of the field production line will be of great assistance in carrying out this work successfully.

According to data supplied by the USSR CSA, by 18 May spring crops had been planted on 87.4 million hectares at kolkhozes, sovkhozes and interfarm enterprises. This represents almost three fifths of the arable land allocated for these crops. During a week's time, the increase in sown areas exceeded 30 million hectares, thus making it possible, in terms of the work rates, to reach the level of a number of past years.

At the present time, with the weather springing "surprises" first in one area and then in another, importance is attached to employing a creative approach in determining the agrotechnical methods to be used out on the fields, to utilizing each hour of time to maximum advantage and to reducing the sowing period to a minimum. Regardless of the circumstances, one indispensable condition must be observed -- each kolkhoz and sovkhoz is obligated to carry out its sowing plan for all crops in a manner such that the state will obtain maximum quantities of high quality products and raw materials.

The farmers in Orenburgskaya Oblast are sowing spring crops on their fourth million hectares. Machine operators from virgin land sovkhozes are participating in the work here. The collectives of leading teams are fulfilling two and three shift norms. In the central chernozem region, many Kursk, Belgorod and Lipetsk farms are carrying out their sowing work in a rapid manner. In response to the decree of the CC CPSU and the USSR Council of Ministers entitled "On the Further Development of Agriculture in the Central Chernozem Region of the RSFSR," the field workers in this large zone are competing to obtain high yields this year. In the Volga region, the tone in the competition is being set by the sowing complexes in Volgogradskaya and Ul'yanovskaya Oblasts.

In all, spring crops have been sown on 48.5 million hectares in the Russian Federation. This is more than 55 percent of the plan. Work is unfolding in the Nonchernozem zone, where sowing work is being carried out on the tenth million hectares of arable land. The sowing work is nearing completion in Moscow and Tul'skaya Oblasts. On the other hand, by the end of the second decade in May the farms in Kostromskaya Oblast had completed their sowing plan by only 32 percent, in Yaroslavskaya Oblast -- by 35 and the farms in Ivanovskaya Oblast -- by 40 percent.

Unstable weather conditions are slowing down the work being carried out in the eastern regions. This is forcing the machine operators to value highly each moment of time and to utilize the equipment with a high degree of productivity. In the Altay region, the sowing work is being completed on the second million hectares. In Tomskaya Oblast, two thirds of the spring crop fields are occupied by barley, wheat and forage crops, in Kemerovskaya Oblast -- 37 percent, Irkutskaya Oblast -- 43 percent and in Krasnoyarskiy Kray -- 34 percent. But the Siberian workers still have a great amount of work to complete out on the spring fields and very little time remains. The farmers are doubling their work efforts.

In Kazakhstan, the main front of the sowing campaign is presently in the virgin land region. Here the spring crops have already been planted on more than 13 million hectares.

The groat fields require special attention. Those who work these fields must make their own contribution towards improving the supply of food goods for the population. The decree of the CC CPSU and the USSR Council of Ministers entitled "Additional Measures for Stimulating the Production and Procurements of Grain From Buckwheat, Millet, Beans and Lentils" is aimed at achieving a solution for this task. A great deal of work remains to be carried out this spring in order to ensure that this task is accomplished. The buckwheat sowings in the Ukraine are being expanded to 340,000 hectares. The sowing work is being carried out at a maximum tempo. New and highly productive varieties are being employed on an extensive scale. The mass sowing of groat crops continues in Rostovskaya, Pavlodarskaya, Aktyubinskaya and Kurskaya Oblasts.

At the same time, valuable crops are still being planted on only negligible areas. The plan for sowing millet in Kuybyshevskaya Oblast has been fulfilled by only 3 percent, Tambovskaya Oblast -- by 13 and in Voronezhskaya Oblast -- by 19 percent. Compared to Ryazanskaya Oblast, where buckwheat has been sown on almost one half of the areas allocated, in Smolenskaya and Orlovskaya Oblasts this important work is only just commencing. The kolkhozes and sovkhozes must search for additional tracts on which to plant their beans and lentils. The cultivation of these crops is now profitable -- the state has established a raised procurement price -- 600 rubles per ton of grain.

A serious lag has developed in a number of areas in connection with the sowing of corn. Grain corn has been sown on 2.9 million hectares, with the industrial technology being employed on 2.3 million hectares. Even in Moldavia, no more than 100,000 hectares have been sown. Such slow work is also being tolerated in certain oblasts in the Ukraine, although there are also many examples here of efficient work being performed by the corn growers. The sowing work was carried out successfully in the Crimea. In all, the brigade of Hero of Socialist Labor N. Tsertiya at the Rossiya Kolkhoz in Novoukrainskiy Rayon in Kirovogradskaya Oblast required only 56 hours for sowing their corn fields. And here the leading machine operators paid a visit to the plantations of a neighboring brigade, against which they were competing. Mass mutual assistance and the extensive maneuvering of equipment and human resources could play an important role in accelerating the sowing of corn in other oblasts and republics.

The interests of the work require a considerable intensification of operations out on the garden plantations. Potatoes have been planted on 1.8 million hectares and vegetables have been sown on 858,000 hectares. In the Russian Federation, the plan for planting potatoes has been fulfilled by slightly more than 34 percent. In Kirovskaya Oblast and in the Mariyskaya, Mordovskaya and Bashkirskaya ASSR's, one tenth of the fields has yet to be sown.

Sunflowers and sugar beets have still not been sown completely in all areas. Upon completing this work, importance is attached to tending the plantations without delay, ensuring that the proper density develops on each hectare and protecting the plants against pests and diseases. On the cotton fields of Central Asia and Azerbaijan, irrigation work is in progress, top dressings are being applied and the inter-row spacings are being cultivated.

Time is causing the rice growers to hurry in carrying out their work. This valuable crop has been sown on 450,000 hectares of irrigated check plots. A serious lag has developed in the Primor'ye and Dagestan regions. Soybeans have been planted on 128,000 hectares. This work must also be accelerated. Sowing work continues throughout the country: spinning flax, hemp, pulse crops, vetch and vetch mixtures, rape, lupine, tobacco, food roots, melon crops, annual and perennial grasses. Work is also being carried out in the orchards and vineyards.

All of the efforts of the farmers are being directed towards creating a firm foundation for the harvest and fulfilling their obligations.

7026
CSO: 1824/264

REGIONAL DEVELOPMENT

SHEVARDNADZE, VASIL'YEV ADDRESS RECLAMATION WORKERS

Tbilisi ZARYA VOSTOKA in Russian 17 Apr 81 p. [illegible] -2

> [Text] As has already been reported, [illegible] epublic reclamation workers meeting has been held in Tbil[illegible] o discuss work results for the 10th Five-Year Plan a [illegible] tasks set reclamation services by the 26th CPSU Cong[illegible] 26th Congress of the Georgian Communist Party. CPSU Cen[illegible] l Committee Politburo Candidate Member and Georgian Com[illegible] st Party Central Committee First Secretary E. A. Shevar[illegible] se's introductory remarks opened the meeting.

In opening the republic reclamation workers' conference, I should first like to note the fact that the tasks of continuing to use reclaimed land effectively are being discussed here immediately after broad practical measures on successfully actualizing the resolutions of the 26th CPSU Congress and the tasks stemming from Comrade L. I. Brezhnev's report at the congress were worked out at a meeting of the Georgian party aktiv and approved by a Georgian Communist Party Central Committee plenum, he said.

Thus, the tasks of further developing reclamation work are being advanced as among the top-priority tasks of our republic party organization. And that is entirely natural, inasmuch as land reclamation, along with the industrialization and chemization of agriculture, is one of the three reference points in further developing this most important branch of the economy, the national economy of the republic and of our entire country.

That is why, when speaking of the tasks of comprehensively developing agricultural production, of improving its effectiveness and quality, Leonid Il'ich Brezhnev placed particular stress in the CPSU Central Committee Accountability Report to the 26th Party Congress on the necessity of decisively increasing land use effectiveness, especially reclaimed land.

That is the first feature of our conference today.

Its second subject is the fact that republic reclamation workers have convened their conference on 13 April, on the very eve of the 60th anniversary of V. I. Lenin's letter, known to all and especially dear to us, "To Communist Comrades of Azerbaijan, Georgia, Armenia, Dagestan and Gorskaya Republic" on the tasks and features of building socialism in the Transcaucasus. That letter was written on 14 April 1921, less than two months after the victory of Great October in Georgia, after that remarkable day when the Kremlin in Moscow was sent a telegram signed by Sergo Ordzhonikidze: "The Red Banner of Soviet power soars over Tiflis. All Hail Soviet Georgia!"

Thus, our meeting today is actually dedicated to the 60th anniversary of Lenin's celebrated letter.

That letter from Lenin is clear testimony to the fact that Vladimir Il'ich Lenin's thoughts and concerns immediately after the establishment of Soviet power were connected with the communists of the Caucasus, with the laborers of Azerbaijan, Georgia and Armenia, with the necessity of effecting socialist transformations in our area.

In May, we will celebrate the 60th anniversary of the establishment of Soviet power in Georgia and the formation of the Georgian Communist Party. And at that time we will again turn to that letter from Lenin, examining again all our activity through its prism. We will analyze how Lenin's orders and behests have been carried out in the course of all those 60 years, how we are now living and working according to Lenin.

But today, we will be dealing with one of V. I. Lenin's instructions, one of his counsels, "begin large-scale work on electrification and irrigation."

"Irrigation," V. I. Lenin wrote, "is most needed by the region, will do most to recreate and revive it, to bury the past and strengthen the transition to socialism."

V. I. Lenin pointed out the necessity of "developing with all our strength the...productive forces of this rich area, the white gold that is irrigation." He stressed that "irrigation is especially important in developing farming and stockraising, no matter what the cost."

Thus, our agenda today is questions of reclamation, large, important questions. And whereas the CPSU Central Committee Accountability Report viewed the further development of agriculture as the basis of the food program to the development of which the 26th Congress attached particular importance, reclamation and reclamation construction are among the basic links which, once taken up, can draw in their wake the whole chain of tasks associated with further developing agricultural production.

This permits the conclusion that reclamation plays an important role in agricultural production growth, in obtaining guaranteed harvests of the basic crops, and that means in creating unionwide and republic food programs. Hence the importance of today's conference, which must be viewed as yet another practical step towards successful implementation of the tasks advanced by the 26th Congress of our Leninist party.

The importance of our meeting increases even more if one takes into account the fact that we are discussing for the first time on a republic-wide scale problems of reclamation construction and the effective use of reclaimed land and are discussing them at such a high level.

The participation of the much-respected Nikolay Fedorovich Vasil'yev, a distinguished party and soviet worker, an important economic leader, and USSR Minister of Reclamation and Water Management, in our conference, attaches a special character to it. If I am not mistaken, Nikolay Fedorovich, this is your first business trip to our republic, and I should like to express my confidence that it will serve as a guarantee of our continued business cooperation and joint fruitful work. I make no secret of the fact that we very much need your advice, your assistance and your support, and we are counting on them very much.

Of course, it is always a great event when a minister comes to the republic. And the arrival of the minister of reclamation and water management is a doubly great event, in that that ministry's activities are all associated with prospects for developing agriculture, ensuring its and the entire national economy's tomorrow. And we wish once again to emphasize that we are very glad to see you, Nikolay Fedorovich, at our meeting.

Man and the land -- that is a single inseparable entity. Man is linked to the land his entire life by bonds of blood. The land is an inexhaustible storehouse, the very greatest wealth of the people. In fact, it is for good reason that the people say: "the wet-nurse land," or as we say here in Georgia, "the land, our mother." When the land blossoms, everything flowers, literally everything all around is transfigured. People's lifes become better, freer, and their labor becomes more fruitful. It is man's calling to take from the land everything it can give, to multiply its riches. It is foremost our reclamation workers who are called upon to do this, as it is they who give the land life.

Our area has been transformed unrecognizably during the years of Soviet power; our abundant land has blossomed magnificantly. It has been given life-giving water to drink, placing once-neglected land at the service of the people.

When V. I. Lenin wrote that letter to the communists of the Caucasus, the total length of existing irrigation systems in the republic was only a couple of hundred kilometers. Today, that system stretches nearly 20,000 km, and upwards of 400,000 ha of our fields are now irrigated.

The resolutions of the March (1965), May (1966) and July (1978) Party Central Committee plenums were important landmarks in the development of reclamation, in putting this branch onto a modern industrial basis. Reclamation problems have been developed on a truely scientific basis in the works of L. I. Brezhnev. Remarkably, Leonid Il'ich cited the further development of irrigation in Central Asia and the Transcaucasus as being among the top-priority tasks at the May Central Committee Plenum.

Subsequently, in carrying out party and government resolutions and Comrade L. I. Brezhnev's instructions, Georgian communists have kept in constant view the problem of building and operating reclamation installations, of raising the agricultural technology level.

Quite a bit of experience has been accumulated in the republic in building and operating irrigation systems such as the Mukhranskaya, Vanatskaya, Texi-Okamskaya, Verkhnye-Samgorskaya and Nizhnye-Samgorskaya, Teletskaya, Saguramskaya, Kavtiskhevskaya, Tedzamskaya and others. Installation of the Verkhnye-Alazanskaya irrigation system was a truly national construction project: this artery of fertility encompasses 108,000 ha of land in Kakheti. Start-up of the second line of this system is at hand.

Reclamation work, which has ancient and glorious traditions among our people, is now being done on the basis of modern achievements of scientific and technical progress, using the advantages of a planned management system.

The construction of large and small reservoirs has been widely developed in the republic in the last decade. Many of them carry a heavy social, as well as economic, load.

The most remarkable, simply amazing transformations have occurred in the Kolkhidskaya lowlands. An age-old dream of our people has been realized: the once-inaccessible, impassable Kolkhid swamp is now subject to man. A marvel of marvels has been created by the energy and skill of people, by their boundless love for the land and attachment to it, by the mighty creative forces given life by socialism. Today, 100,000 ha of what was once swamp faithfully serves the interests of our national economy. The comprehensive utilization of Kolkhida land has been an excellent school for our reclamation workers, our scientists and all communists.

However, any experience is valuable only if it teaches us to reveal shortcomings, if it helps us set more complex, broader-scale new tasks, if it enables us to better see the long-range future and to lay out concrete, practical ways of attaining the goal set.

It is on precisely those tasks, on unsolved problems, that we need to focus our attention at today's meeting, and business-like, constructive criticism of existing shortcomings and a self-critical approach to this matter must become its main core, the primary topic of our discussion today.

Only in such a business-like atmosphere will we be able to work out truly useful resolutions and constructive proposals. And we are in extreme need of such proposals now.

The 26th Party Congress and the CPSU Central Committee and USSR Council of Ministers Decree "On Steps to Increase the Production of Southern and Subtropical Crops and to Further Accelerate the Development of Agriculture in the Georgian SSR" set all workers in republic agricultural production very complex, very important tasks. In the 11th Five-Year Plan, the average annual gross agricultural output volume in the Georgian SSR is to increase by 22-24 percent. We will be able to achieve this only on a base of continued production intensification, transferring it to industrial tracks. We are faced with irrigating 60,000 ha and draining 35,000 ha of new land, with providing more than 100,000 ha of pasture with water and with renovating irrigation systems on 42,000 ha.

What will be needed to do this?

First, we need to improve the planning of reclamation measures and, in particular, the planning and construction of water-management installations. Second, we need to work out steps aimed at improving the efficiency of operation of existing systems in order to ensure the receipt of consistently high harvests. Third, and finally, we need to determine steps to strengthen party leadership of this sphere, ways of perfecting the organizational forms of our work, of increasing cadre responsibility for the end results of labor.

It is obviously just such questions and problems which must be in the center of our attention and around which our discussion today must revolve.

This is important, because proper planning is the basis for the future successful operation of any system. We have repeatedly been convinced of the lamentable results of incorrect planning. Unfortunately, such planning has occurred, and there were serious errors made here, which is why we are emphasizing that we need a thoughtful, skillful approach in this matter. Any planning negligence will subsequently turn into enormous and generally nonrecompensible losses.

Representatives of one of the primary planners of our water management facilities, the "Gruzgiprovodkhoz" Institute, are in attendance at our meeting. That collective does a great deal of work. However, the schedules for releasing planning documentation are often not met and the quality of surveying work leaves much to be desired. We expect business-like assistance from specialists at other scientific research and planning institutes in the form of efficient technical resolutions based on the very latest scientific and technical achievements. This work must be increased in every way possible, better use must be made of the creative opportunities of specialists, and the work must be defined relative to the forms of providing those specialists with incentives.

There are also quite a few problems in construction. We note with satisfaction how energetically our young organization, the "Glavgruzvodstroy," has taken up this work. This collective, headed by Comrade A. G. Museridze, has actually embarked on its work energetically and well, with much support from the union ministry, of course. However, just energy and a desire to work well is no longer adequate. If one bears in mind the scope of the tasks facing us and the fact that this collective's coming-to-be is now far behind, we can in no way be satisfied by the previous rates of construction. And the quality of the projects still does not meet the demands being made. I think the comrades will express themselves openly on this matter and will make concrete proposals.

Reclamation is not a matter just for reclamation workers alone. It has both an economic and a social aspect, as was already stated. Reclamation work impacts favorably on improving the activity of many branches of each region of the republic. That is why it is especially important to approach the resolution of all these tasks in a comprehensive manner, concentrating our forces correctly. In this connection, the proposal to take comprehensive steps to reclaim and utilize land on a number of newly organized sovkhozes in Eastern and Western Georgia deserves attention. True, we will require additional capital investments, but this is, in our view, a very promising matter, and we count, I admit, on the support of our guests in resolving this question positively, first honors to the deeply respected Nikolay Fedorovich.

In fact, our state has not begrudged funds when it was a matter of strengthening the material-technical base of rural areas. Year after year, the start-up of newly reclaimed land has increased. However, as Comrade L. I. Brezhnev pointed out at the 26th Party Congress, the center of gravity has now shifted to return on capital investment, to agricultural productivity growth.

From this point of view, our ministries of reclamation and water management, and also agriculture, deserve the harshest criticism. There have been some sudden changes and appreciable advances, especially in the work of reclamation workers, but there are also a great many shortcomings. True, crop yields increased somewhat on reclaimed land in the 10th Five-Year Plan. However, they are still below the union average for grain, feed and certain other crops, as well as vegetables. Moreover, there are quite a few rayons in which kolkhozes and sovkhozes did not even reach the average republic level last year in terms of crop yield indicators on irrigated land. That won't do!

There are significant reserves in this area, and we need to make full use of the rich potential of the irrigated hectare. Under the conditions in our republic, where every inch of earth is accounted for, this is especially important. To this end, we need foremost to fundamentally restructure the activity of the operations services. This process has thus far proceeded extremely slowly, for which our Ministry of Reclamation and Water Management has more than once been seriously criticized by the party. However, comrades have yet to draw the proper conclusions. Unproductive disputes between the Ministry of Agriculture and the Ministry of Reclamation and Water Management take up a great deal of time. Some complain about a lack of irrigation water during the growing season. Others are convinced that there is water, but that it is being used inefficiently, extremely poorly. And relations are generally referred to in the past tense, now that it is impossible to find out who was at fault and now that essentially nothing can be done about it. And that instead of taking up the cause through joint efforts. Such not entirely healthy, not entirely business-like relations are correspondingly transmitted to local organizations as well.

It is obviously necessary to increase the responsibility of water management organizations for the harvest. To put it bluntly, it does not become certain communists and officials to measure their own work solely in terms of meeting plans for major overhauls on facilities, cleaning canals, supplying water, and then walk around, as the saying goes, like heroes, while a meager, poor harvest ripens in the fields.

Party committees and local soviet organs must manage these processes better. Their influence in this matter has clearly been inadequate thus far. All questions should be resolved flexibly and efficiently, and party and soviet organs must always have the decisive word.

Let's agree right away, comrades, that neither today, at the conference, nor afterwards, will allowances be made for so-called objective reasons. We are entitled to demand and will demand that the planned harvests be obtained from every hectare of reclaimed land. It is precisely a high harvest that must be made the primary criterion in evaluating work in this particular direction by both agricultural and water management organizations, by local party and soviet organs. Such an approach is surely the most correct, the most party- and state-oriented approach of all.

Now that the taut years of the 10th Five-Year Plan are behind us, years in which the Georgian SSR met the five-year plan ahead of schedule, both in industry and in agriculture, and in which connection republic laborers received a warm letter of congratulations from L. I. Brezhnev and were given the challenge Red Banner of the CPSU Central Committee, USSR Council of Ministers, AUCCTU and Komsomol Central Committee, now that our party organization has won so high an evaluation at the 26th CPSU Congress for accelerating the tempo of socioeconomic development, we can note with satisfaction that the labor of our reclamation workers has played a part, a considerable part, in all our successes and achievements. This obligates you, comrades, to work with even greater energy, with even greater stubbornness and persistence, to restructure your work in accord with the new demands made on our agriculture by the 26th Party Congress.

The press has published greetings from the Georgian Communist Party Central Committee to participants in our conference. It expresses a firm conviction that republic reclamation workers, construction workers, planners and scientists will cope honorably in the 11th Five-Year Plan with the tasks facing them.

A business-like, interested, principled discussion of all practical problems at our conference will unquestionably facilitate further improvement in water-management construction, increasing the power of the irrigated hectare and, on that basis, growth in the contribution of republic reclamation workers to implementation of the food program, to the cause of socially transforming the Soviet countryside.

USSR Minister of Reclamation and Water Management N. F. Vasil'yev gave a report at the conference.

"The resolutions of the 26th CPSU Congress anticipate the development and implementation of a food program," he said. "The basis of that program will be further development and increased efficiency of agriculture. Major financial and material resources are being allocated to develop agriculture, and this branch is being put on an industrial basis. One distinguishing feature of party agrarian policy in the 1980's will be that its center of gravity will be shifted towards increasing the return on capital investments.

It is from this point of view that we must examine the results of and prospects for developing reclamation. Our country now has some 30 million hectares of reclaimed land, including 17.3 million hectares of irrigated land. Irrigated and drained land, which occupies about 10 percent of the plowed and planted field area in the country, yielded 34 percent of all gross farming output in the public sector in 1980. During the 10th Five-Year Plan, reclaimed land accounted for 70 percent of the increment in average annual gross farming output production, and it has been from just such land that the kolkhozes and sovkhozes have obtained all their cotton and rice, 75 percent of their vegetables, 38 percent of the grain and corn, 21 percent of the coarse and succulent feed and much other output. The productivity of a hectare of irrigated land is 5.8-fold higher than of nonreclaimed land, and that of drained land -- 1.5-fold higher. Such is the contribution of reclamation to agricultural production, and it will grow year by year, because reclamation enables us to involve unused land in agricultural circulation, to create conditions for increasing crop yields and improving the effectiveness of chemization and mechanization.

It would be hard to overestimate the importance of reclamation work in the Georgian SSR, N. F. Vasil'yev continued. There are two pronounced zones here, an eastern zone with a dry continental climate, in which irrigation is required, and a western zone with a maritime, humid, subtropical climate, in which drainage is necessary. During the past five-year plan, 54,000 ha of irrigated land and 27,000 ha of drained land was put into operation in the republic, which now has 400,000 ha of irrigated land and 115,000 ha of drained land. In the 10th Five-Year Plan, reclaimed land accounted for 48 percent of the increment in average annual farm output production.

The CPSU Central Committee and USSR Council of Ministers Decree "On Steps to Increase the Production of Southern and Subtropical Crops and Further Accelerate the Development of Agriculture in the Georgian SSR" anticipates concrete assignments on irrigation and drainage, the construction of specialized sovkhozes, and development of a production base for water-management organizations.

Comrade Vasil'yev dealt with problems not solved by Georgian reclamation workers in the 10th Five-Year Plan. During that period, he said, fodder and perennial crop yields increased somewhat. However, there was no growth in other crop yields. The 10th Five-Year Plan assignment for grain production on irrigated land was therefore met by only 48 percent, for grain corn -- 28 percent, sugar beets -- 80 percent, and vegetables -- 85 percent.

During the past five-year period, the availability of drained land has not increased, although 27,000 ha was drained. That is, it turned out that reclamation workers released to administrators as much land was was withdrawn from production. Farming indicators are also not very high on drained land, although there has been growth in yields for grains, vegetables, silage corn and annual grasses on such land. The grain production assignment was met by 85 percent.

Irrigation frequency remains low: 2.9 times for vegetables, 2.2 times for fodder crops and 1.5 times for grains. Some 95,000 ha was irrigated only once. The capacity of repair-construction organizations is growing slowly.

In early April, we and the USSR Ministry of Agriculture held a joint meeting of the collegium, with the participation of union republic ministers of agriculture and reclamation and water management, the speaker continued. We discussed agricultural and water-management agency tasks of improving the use of irrigated and drained land. Comrade M. S. Gorbachev, CPSU Central Committee Politburo member and CPSU Central Committee secretary, spoke at the collegium meeting. He pointed out, quite correctly, that the potential of reclaimed land is being used by no means fully, that yields are often 1.5- to two-fold lower than possible, that time needed to recompense installation expenditures stretches out over many years. Special note was made of the low grain corn yields in the Transcaucasian republics. Georgian reclamation workers must therefore do a great deal of work on improving the use of irrigated and drained land.

The end result, the harvest, must become the primary criterion of the economic effectiveness of reclamation. All tasks must therefore be resolved through the joint efforts of scientists, planners, builders, operators and farmers.

The most serious attention must be paid to following irrigation norms and schedules, to putting existing reclaimed land into proper order, to setting up proper technical servicing of reclamation systems.

Speaking about capital construction problems, N. F. Vasil'yev noted that one of the most serious such problems is the failure to follow construction schedules. Suffice it to say that the Verkhnye-Alazanskaya irrigation system has been under construction for 16 years now, and no one knows when it will be finished. And the volume of reclamation work will increase appreciably in the new five-year plan, and construction tasks will be more complex. The primary direction in the work of our builders will be large construction projects, the completion of work already begun and the expansion of new work. And much will depend on proper planning in the successful implementation of this program.

In critically evaluating the work of planners, the speaker emphasized that it is even now very important not only to determine top-priority measures to improve their work, but also to provide planning documentation for work in 1982. Meeting five-year plan assignments, he said, is the criterion on whose basis the business and political qualities of administrative personnel and their ability to work in the new way, to ensure better efficiency and quality, will be evaluated. It is necessary to raise the quality of construction engineering and reclamation system operation to a higher level. And the primary direction in this work will be to reduce the proportion of manual operations, to introduce new forms of labor organization and wages, and to use new equipment and progressive components and materials.

Comrade Vasil'yev noted with satisfaction that Georgian reclamation workers coped successfully with the first-quarter assignments. Having carried out the reclamation work plan in terms of basic indicators, they exceeded last year's level and prepared reclamation systems well for the growing season. That is very important, since a good start at the beginning of the year greatly determines the results in the remaining months.

Georgian reclamation workers will doubtless carry out the tasks facing them with honor and will make a worthy contribution to developing agriculture and actualizing our country's food program, the minister said in conclusion.

The following republic ministers gave reports: reclamation and water management -- G. B. Gadeliya, agriculture -- Sh. M. Etsadashvili, Glavgruzvodstroy chief -- A. G. Muneridze; party, soviet, administrative and leading production workers, specialists and scientists participated in the debates on the status of reclamation in the republic. They analyzed in depth the mistakes and errors which occurred in the 10th Five-Year Plan, outlined ways and means of overcoming them, and touched on the tasks facing the reclamation service in the current five-year period.

All those who spoke indicated that we must not work today to measure up to yesterday's marks. What has been achieved is only a foundation for further movement forward. Life insistently demands improvement in all reclamation links, in the entire complex of water-management work.

We cannot be reconciled to the fact that harvests are still low on irrigated land, the speakers said. Last year, for example, the per hectare yields of grains, vegetables, potatoes, grapes and other crops on these lands turned out to be considerably below the levels planned by the 25th Georgian Communist Party Congress. Average republic grain corn yields were not achieved by 16 republic rayons, vegetables -- by 21, potatoes -- by 10 and grapes by 23. This led to losses of 12,000 tons of grain, 20,500 tons of vegetables and 15,700 tons of potatoes.

These figures indicate much, and foremost the fact that the range of questions on whose resolution increasing the effectiveness of reclaimed land depends is not reserved just to the Ministry of Reclamation and Water Management and the Ministry of Agriculture. Success depends both on raising farming standards by carrying out a complex of agricultural measures and on a thriftier attitude towards irrigation water, on increasing mobility and discipline in the activity of water-management organizations.

Work in the social production system should be organized in such a way that farms in a zone of irrigation farming use high-yield, selected varieties of grain crops and follow schedules for working the soil, sowing, applying fertilizers, irrigation and gathering the harvest. Unfortunately, there are still quite a few examples of this work being left to drift. The 26th CPSU Congress pointed out that our continued advance will depend in increasingly large measure on the skillful and effective use of all available resources. In this connection, the orientation towards economy, towards the more complete and intelligent use of what is available to us, will demand a new approach to many administrative problems, and that is an axiom of effective work in each ministry and each collective

We need once and for all to leave behind us what has at times been the unsatisfactory primary recording of crop yields and other economic indicators. For example, some leaders, lacking factual data on crop yields on irrigated land on their farms, enter arbitrary figures on the corresponding statistical reporting graph. These fictitious data not only lower average crop yield indicators for individual rayons and the republic as a whole, but also fundamentally distort the actual state of affairs.

The present level of agricultural development enables to program the crop yields on specific irrigated sections. Of course, these figures must be realistic, within the agronomic potential of the sectors. Given conditions in the republic, it is entirely realistic to speak of grain harvests of 40-45 q/ha, for example. This is confirmed by the experience of the leading farms. But in order to reach these frontiers, we should strictly follow the entire complex of agricultural measures, applying mineral and organic fertilizers to sown areas. And the decisive factor is to use water resources skillfully.

This is taken to mean high-quality operation of irrigation and drainage systems, performing all the work needed to renovate them and level the land.

Today, 241,000 ha of irrigated land and 147,000 ha of drained land is covered by technical service, comprising 71 and 96 percent, respectively.

Practice has shown that irrigation water provides the desired effect only given close interaction between reclamation workers and agriculture specialists. Therefore, it is obviously time to create a special agronomic service attached to the republic Ministry of Reclamation and Water Management which will monitor the use of high-yield, selected varieties of grain, apply full doses of fertilizers to the soil at the proper times, and follow cultivation, sowing and harvesting schedules in the irrigation farming zone.

In Georgia, with the little land it has, it is very important to expand the sphere of application of reclamation. This concerns first of all the Kolkhidskaya lowlands, which have large reserves for further increasing the production of valuable southern and subtropical crops, as well as stockraising output.

There are great opportunities for developing and intensifying viticulture, fruit-, vegetable- and potato-growing in Eastern Georgia, where we can utilize the foothills and intensify agricultural production even more.

In recent years, small-scale irrigation has taken on increasing importance in reclamation. Whereas a total of only 25,000 ha of fallow land was irrigated using mobile equipment in 1971-1975, during the 10th Five-Year Plan, that indicator reached 67,000 hectares. Last year alone, upwards of 20,000 ha of unirrigated land was watered.

There is a special demand for such watering during drought periods, which have been increasingly alarming to farmers recently.

In spite of the fact that more than 40 reservoirs designated for small-scale reclamation have been built in the republic, this work must still be deemed to be basically random in nature. Long-range plans for developing small-scale reclamation have not been drawn up and the potential of individual regions has not been revealed. We must achieve a situation in which small-scale reclamation and mobile equipment achieve the greatest impact, the highest result, in all branches of agriculture.

Agricultural laborers are especially concerned about the quality of reclamation installation construction, the speakers emphasized. As a result, a whole series of projects considered to have been released for operation are not on the fixed assets balances due to poor-quality construction, large numbers of defects and large amounts of unfinished work. Being practically ownerless, such installations finally become unusable.

We can no longer be reconciled to poor construction quality.

The speakers also touched on the problem of organizational lack of coordination, which includes the servicing of intrafarm systems. It has been more than 10 years now since the kolkhozes and sovkhozes have been made responsible for monitoring the operation of such systems, but many farms have turned out to be unprepared for this work. They do not have the appropriate material-technical base and lack skilled personnel. The republic Ministry of Agriculture has not allocated corresponding materials for routine maintenance and major overhauls on such systems. Now that agricultural production specialization and concentration on a base of interfarm cooperation is the main direction of branch development, it also becomes promising to concentrate work on caring for and operating intrafarm networks on a cooperative basis. Certain experience has already been accumulated in the republic in operating such organizations. Georgia now has five interfarm reclamation associations. By strengthening the material-technical base of these and similar formations and by improving their structure, we can achieve considerable improvement in the servicing of intrafarm reclamation systems.

We are correct in demanding more of reclamation scientists, the speakers said. As of now, the republic still does not have a smoothly functioning, scientifically based system of reclamation management. And although republic scientific research institutes have recently broadened and deepened the subject matter of their research, solved a number of important problems and made quite a few useful recommendations, the scope of the research and the rate of its introduction still do not fully meet the demands of the day.

Scientists should study local conditions more thoroughly and comprehensively, work out effective irrigation and drainage methods, and persistently introduce them into practice. We need to strengthen the role of science in the highly effective use of reclamation equipment and hydraulic engineering installations, in further developing the reclamation service.

Obtaining a consistently high harvest from each hectare is the main task of reclamation workers, and both operators and planners, builders and agronomists and scientists, bear an equal responsibility for implementing this responsible task. That is why coordinating the activity of all services, collectives and links associated in one degree or another with high yields from irrigated hectares must be regarded as of paramount importance.

Improving the planning of reclamation measures and the operation of existing irrigation systems were cited as being among the reserves for increasing gross harvests of agricultural output. In this regard, particular attention should also be paid to improving the organizational forms of branch management, to increasing the responsibility of each worker for the end result. Conference participants stimulated an interest in the pivotal problem of training, selecting and placing personnel, of improving the qualitative composition of specialists. The reclamation worker is one of the central figures in modern agriculture. It is for good reason that he is called 'event-creator. The fertility of the land and the fate of the harvest depend in considerable measure on his skill, experience and attitude towards his work. That is why training highly-skilled, broadly-specialized personnel and constant concern for and attention to them on the part of party, soviet and economic agencies must become a matter of top-priority importance.

It is precisely they, the specialists of all ranks and all links, that are faced in the current five-year plan with mastering a broad work front in actualizing the grand designs of the 26th CPSU Congress.

The prophetic words of V. I. Lenin's celebrated letter "To the Communist Comrades of Azerbaijan, Georgia, Armenia, Dagestan and Gorskaya Republic" on the transforming power of irrigation, the meeting stressed, will continue to be guides for Georgian reclamation workers, who must put 60,000 ha of irrigated land into operation and drain 3[illegible],000 ha of swamp, water 100,000 ha of pasture and renovate irrigation systems in 1981-1985.

Concrete practical measures have been planned for fully carrying out this water management construction program. For example, we plan to finish all construction on irrigation systems of Eastern Georgia, the Tarihan tracts and the first and second lines of the Zilich, Udabno and Khashmi-Patarudzeul', to begin construction of the second line of the Verkhneye-Alazanskaya irrigation system, the largest in Georgia, and also such most important water management projects as the Naurdlis-Arkhskaya, Tbilisi-Kumisskaya, Zemo-Khashurskaya and others in the 11th and 12th five-year plans. In order to create a solid fodder base for stockraising, work will continue on reclaiming land on specialized complexes and on restoring saline land.

New industrial enterprises to be served by reclamation construction are appearing on the map of the republic. They include reinforced concrete products plants in Kachreti and Kolebani, a clay drainage pipe plant in Nodzhikhevi, a maintenance machine shop in Telavi, and other production facilities.

All this will demand a significant rise in the technical level and quality of our work. Plan stability and precision and coordination in the work planned for the five-year plan are an important help in successful construction, as any change in annual programs or insertion of new projects into them causes a scattering of capital investments, extends construction schedules and upsets labor rhythm. And that in the end affects the quality and effectiveness of reclaimed land use and increases the amount of unfinished construction.

The tasks set reclamation workers are complex and responsible. They demand resolute improvement in the style and methods of work in all sectors and all spheres of water management construction. Success can be ensured only given continuous rise in the level of knowledge and skill of reclamation workers, the intensified responsibility of each worker at all levels and their increased initiative, efficiency and discipline.

Reclamation workers are entrusted with the most valuable national wealth, the land. They must be active fighters for each hectare in order to keep it in agricultural circulation, to obtain as much output as possible from it.

It is our common task to create for reclamation workers the conditions necessary for creative labor, to direct their efforts into overcoming bottlenecks and fulfilling the plans and obligations for 1981 and the five-year plan as a whole. The reclamation worker must not feel he is simply an executor; he must be answerable for his own sector and be competent and principled in carrying out reclamation strategy and tactics.

The efforts of all kolkhoz and sovkhoz workers, of all rural laborers, must be focused on the well-organized, high-quality irrigation of farmland, on maximum assistance to farms in raising agricultural crop yields.

The CPSU Central Committee and USSR Council of Ministers Decree "On Steps to Increase the Production of Southern and Subtropical Crops and Further Accelerate Agricultural Development in the Georgian SSR" and the awarding of the challenge Red Banner of the CPSU Central Committee, USSR Council of Ministers, AUCCTU and Komsomol Central Committee to the Georgian SSR for the eighth year in a row are, the main speakers and those speaking in the debates stressed, yet another clear manifestation of party and government concern for developing and strengthening the economy of the Georgian SSR. This obligates each of us to work with even more energy, to achieve a situation in which the country obtains farming and stockraising produce in ever-increasing amounts. Republic reclamation workers have every opportunity to mark the first year of the 11th Five-Year Plan and the 60th anniversary of the establishment of Soviet power in Georgia and the formation of the republic communist party with new labor deeds.

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AGRO-ECONOMICS AND ORGANIZATION

MOLDAVIAN FOOD PROGRAM NEEDS COORDINATION, NEW TECHNOLOGY

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 16 Apr 81 p 2

[Article by V. Ivanenko, chief engineer of the Production and Technical Administration of the Moldavian SSR Ministry of Fruit and Vegetable Farming, Kishinev: "The Partner's Obligation"]

[Text] Specific experience in an overall solution of the food problem has already been accumulated in Moldavia. The Moldplodoovoshchprom Association (now the Moldavian SSR Ministry of Fruit and Vegetable Farming) established in 1972 undertook the organization of the procurements on kolkhozes and sovkhozes of all commodity fruit and vegetable products, their industrial processing and the delivery of fruits, vegetables and table grapes to the country's industrial centers and the republic's cities. The policy of an accelerated development of this major agroindustrial complex brought quite good results. During the past five-year plan the average annual volume of fruit, vegetable and grape procurements increased 1.3-fold in the sector, exceeding 1.5 million tons. The output of canned fruits and vegetables, averaging more than 1.2 billion standard cans annually increased considerably.

A dynamic development of the sector's base and a rise in the technical level of enterprises became some of the main factors ensuring progress. Capacities designed for the manufacture of 540 million cans annually were put into operation during the 10th Five-Year Plan. A total of 20 million rubles were utilized in excess of the five-year assignment for the development of the processing sector. At the same time, the equipment pool was replaced significantly. Hundreds of units of highly productive, new machines and dozens of automatic lines appeared at processing enterprises. However, most of this equipment was imported or manufactured at the republic's machine building enterprises. The trademark of the plants of the Ministry of Machine Building for Light and Food Industry and Household Appliances is seen on it much less often. Even if it is seen, often it turns out that this is poor-quality equipment.

In order to become convinced of this, suffice it to observe the equipment manufactured by the Ministry of Machine Building for Light and Food Industry and Household Appliances in operation and to talk with service personnel.

For example, the autoclaves manufactured by the Batumi Food Machine Building Plant have a sad reputation. The low quality of their manufacture not only negative affects technology, but at times leads to injuries as well. We also receive grating machines with significant defects from this enterprise. Operators have serious complaints against many units manufactured at the Bolokhovo Machine Building Plant, the Kishinev Food Equipment Plant and the Odessa Food Machine Building Plant.

However, defects can be eliminated. But what should be done with obvious unfinished design work? How to connect equipment representing yesterday and sometimes even the day before yesterday in canning production to a modern operation line? For example, we receive oil-diffusion roasters from Odessa. This equipment is very necessary for us. However, it has low characteristics. The roasters are very unproductive and it is very difficult to maintain the necessary regime on them. Finally, they are inconvenient in use.

The machines for washing and grinding fruits and vegetables are in no way convenient for us. We have many complaints against other types of equipment. We regularly record our remarks and proposals for design improvements in machines in special questionnaires sent to us by manufacturing plants every year. However, judging from the reaction to these remarks, in all probability they are needed exclusively for reports.

For the sake of fairness it should be noted that our relations with the developers of the Odessa Special Design and Technological Office for Food Machine Building have changed for the better recently. This year they have introduced several interesting long-term innovations into the sector. Our mutual contract on technical cooperation concluded for the period until 1985 contributes to this significantly.

In the contract we pay principal attention to unsolved problems. There is more than enough of them; for example, vegetable cleaning, pit-removing operations, design of finished products and many others. Let us take the pasteurization and sterilization of liquid products. In order to somehow find a way out, we must adapt similar equipment used in the dairy industry. However, whereas, for example, milk is pasteurized at a temperature of 70 to 80 degrees, juices, at 100 to 110. Hence the frequent breakdowns of machines and other troubles.

All these facts bring us to the following generalization: The developers of new equipment for the processing of fruit and vegetable products obviously do not keep pace with the demands of the day. Moreover, it appears that the vast changes now taking place in agricultural production--introduction of industrial technologies and maximum intensification, specialization and cooperation--have caught them by surprise. In any case, we, canning industry workers, feel especially acutely that the development of processing equipment does not keep pace with progress but seems to be pursuing it.

This is especially alarming because our present tasks, as never before, are connected with new technologies and with new machinery and equipment. The following is perhaps the most important of these tasks: During the five-year plan that has begun we must triple the volume of aseptic canning of fruit and vegetable semiproducts and increase the volume of quick freezing 2.5-fold.

I would like to stress: These are not merely new technologies. This is perhaps the general trend in the improvement in canning production and increase in its efficiency. It is not accidental that the following is stated in the Basic Directions adopted by the 26th CPSU Congress: "To widely use... the aseptic method of fruit and vegetable canning..."

What is it and what are its advantages?

The fruit and vegetable semi- or finished product is subjected to sterilization at a high temperature during a very short (1 to 2 minutes) time and is cooled just as quickly. After it is placed in special sterile capacities, it can be stored for a year. What does this give? First, the vitamins and palatability of products are retained better. Second, possibilities of lowering seasonal "peaks" in production open up. Semifinished products and fruits preserved by the aseptic method during the ripening season can then be processed all year round until the new harvest. Third, the geography of canning production can be expanded. The primary, a kind of "procurement" enterprise, can be located in the country's southern regions and the processing enterprise, to where the semifinished product will be delivered under aseptic conditions and where finished output will be produced, in the northern regions.

It is hardly possible to enumerate all the advantages of this canning method. Most likely there is no need for this. To realize them, it is necessary to quickly develop a whole set of special equipment, pumps, machines and transport facilities, including railroad thermos tanks. Here again designers and machine builders are not in a rush. With the best will in the world it is possible to mention only several more or less successful developments by the Odessa Special Design and Technological Bureau for Food Machine-Building and by several other organizations. But, in principle, there were only discussions on this subject during the entire past five-year plan.

A few years ago our specialists together with scientists developed and carried out an experimental repackaging (without additional heat processing) of sterile juice in reequipped railroad wine thermos tanks serially manufactured by the Zhdanovtyazhmash Association. The results surpassed all expectations. This made it possible to work out and issue orders and initial requisitions for the development of special technological and transport equipment to the Ministry of Machine Building for Light and Food Industry and Household Appliances and the Ministry of Heavy and Transport Machine Building. Technical and economic calculations for the substantiation of the construction of an enterprise for the processing of semifinished products delivered by special transport facilities under aseptic conditions in one of the country's regions were performed.

For now matters have come to a standstill, first of all, because the workers of the Zhdanovtyazhmash Association delay the designing and manufacture of special tanks. In turn, this hampers the development and realization of other important plans. It appears that the technical base again lets us down.

It only remains for me to mention that the implementation of the food program envisaged by the party begins not only in the field, not only in the shops of processing sectors. It can be rightfully said that it also begins at the Kuhlman drafting units of developers and, of course, at the work places of machine builders.

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RESULTS OF EXPERIMENTAL IMPLEMENTATION OF NEW GRAIN ACCOUNTING SYSTEM

Moscow ZAKUPKI SEL'SKOKHOZYAYSTVENNYKH PRODUKTOV in Russian No 4, Apr 81 pp 38-39

[Article by S. Mambish, Candidate of Technical Sciences and head of laboratory for technical control over production and output quality at All-Union Scientific Research Institute of Grain and Grain Products; Z. Chukhar'ko, Candidate of Economic Sciences and senior worker at VNIZ; N. Tsimbalyuk, chief of Administration of Bookkeeping, Reporting and Control of USSR Ministry of Procurements: "Results of Experimental Introduction of New Grain Accounting System"]

> [Text] Issue No. 4 of the journal ZAKUPKI SEL'SKOKHOZYAYSTVENNYKH PRODUKTOV [Procurements of Agricultural Products] for 1979 contained an article on a task of the USSR Ministry of Procurements calling for the experimental introduction of a new grain accounting system developed by VNIIZ [All-Union Scientific Research Institute of Grain and Grain Products] and the ministry's Administration for Accounting, Reporting and Control. The results of this endeavor have been summarized and discusses at enterprises, in the appropriate production administrations, in a number of union republic procurement ministries and at a scientific-technical council of the USSR Ministry of Procurements.

The essence of the experiment lies in the fact that the grain is being accounted for not on the basis of physical weight, as called for in the present accounting system, but rather on the basis of standard basic bulk. The physical bulk of each batch of grain being delivered to an enterprise is converted into a standard basic figure, taking into account the evaporation of surplus moisture, the removal of weeds and dust and the inevitable conversion of grain from the principal crop into waste products during its processing and storage. Grain being delivered by rail, with deviations in bulk and quality which fall within the permissible limits, should be credited according to data furnished by the shipper, excluding actual natural losses (within the limits of the established norms).

Grain that is shipped and released for all types of transport and for processing is also accounted for and written off as standard basic bulk, similar to grain waste products. Basic norms and computational algorithms that are uniform and standard for all zones have been developed for this purpose. When summarizing results with regard to the receipt and consumption of grain, consideration must be given to the errors which occur during weighing and the determination of quality, presented in special tables.

The principal factor in the new grain accounting system is that greater control is exercised over the preservation of state grain resources. If a materially responsible individual received a definite amount of grain that was converted to standard basic bulk, he must report upon the grain that is in basic condition. If a greater quantity of grain is converted into waste during grain cleaning operations than authorized in the norms, then a grain shortage develops.

In 1978 and 1979, the system of accounting for grain according to basic bulk was introduced on an experimental basis at seven enterprises of four union republics (RSFSR, UkSSR, Moldavian SSR and Lithuanian SSR). Author's supervision was carried out by VNIIZ and its Kazakh and Kuban' branches.

Checks were carried out on 35 experimental batches of grain (16 batches of wheat, five batches of rye, six batches of barley, three batches of oats, two batches of millet, two batches of peas and one batch of buckwheat) from an overall mass of 669,400 tons. All of the batches were cleaned, with justified changes in the mass through quality improvements (reductions in moisture and weed content). The results of the cleaning were checked by attached inspectors of GKhI [State Grain Inspection] and approved by the appropriate oblast (kray) state inspections for procurements and the quality of agricultural products. The materials of the experimental introduction were also examined during production conferences of enterprises, oblast (kray) grain products administrations and in republic ministries of procurements (UkSSR, MSSR and LiSSR).

The specialists attached to enterprises (Kirovsk-Omsk, Kochenevo and Pomoshnyanskiy elevators, Armavir, Vil'nyus and Poltava grain products combines and the Drokiya Grain Receiving Enterprise), oblast (kray) grain products administrations (Novosibirsk, Omsk, Poltava, Krasnodar, Kirovograd) and the ministries of procurements of union republics (UkSSR, MSSR and LiSSR) placed a high value on the new grain accounting system, considering it to be progressive compared to the existing one and recommended the continued introduction of this system of accounting according to basic bulk.

During the experimental introduction process and the discussion of its results, it became apparent that the methodological instructions for grain accounting required updating and more precise definition. The proposals for supplementing and defining more precisely the methodological instructions, as expressed by the specialists of enterprises, oblast administrations and union republic ministries, were concerned mainly with expanding the information provided in the report on the movement of grain products (Form No. 37), particularly average data on grain quality upon receipt and consumption, on the movement of the waste products and on the right to write off losses, as required for operational reporting.

The operational experience of the enterprises has shown that one of the most laborious processes when computing the basic indicators is that of selecting the conversion factors from the tables. The use of such computers as the EFM-446, Askota-170 and Zoyemtron-382 does not solve this problem, since their limited operational potential prevents them from computing these factors automatically.

The complete automation of accounts can be achieved through the use of electronic calculators which ensure the carrying out of all arithmetic functions, storage operations and logic operations and which have an adequate operational memory capacity. Such requirements are met by the Iskra type invoice-calculators which, in conformity with an order handed down by the USSR Ministry of Procurements, must become the principal technical base for group information communications stations. At a number of enterprises within the Ministry of Procurements system, use is already being made of the Iskra-534 and Iskra-2302 type EBM's [elektronnaya bukhgalterskaya mashina; electronic calculator].

Based upon expressed wishes, the structure of Form No. 5 and Form No. 37 has been defined more precisely and a program has also been developed for accounting for grain according to basic bulk, using the Iskra-534 and Iskra-2302 EBM machines. These program ensure the possibility of automating the accounts and controlling the initial data on bulk, moisture content and the content of weed impurities in Form No. 5 and the accounts on the basic bulk of grain and waste products in Form No. 5 and Form No. 37.

Thus an indispensable condition for introducing the new grain accounting system is that of ensuring that the enterprises are supplied with Iskra-534 or Iskra-2302 EBM machines. In addition to the automated accounting for grain according to basic bulk, these EBM machines will also be used for other operations associated with automatic control systems.

The introduction of an automated grain accounting system, in accordance with basic bulk and using Iskra-534 and Iskra-2302 EBM machines, the programs of which call for automatic control over the delivery of initial data on the bulk and quality of grain upon receipt and also accounts on the basic bulk in connection with the receipt and consumption of grain and the waste products, will facilitate and simplify the exercising of control by the senior foremen of production sectors, chief bookkeepers, PTL chiefs and GKhI inspectors at enterprises, over the correct conduct of grain accounting procedures by comparing the control figures against the summary data on the receipt and consumption of grain. At enterprises of the 1st and 2d groups, the introduction of the grain accounting system according to basic bulk will make it possible to reduce the number of workers engaged in grain accounting operations by 1-2 individuals.

The responsible individuals are released from having to fill out the lists on Forms 3, 4 and 5 on a daily basis and also the reports on grain movements (Form No. 37). The actual expenses for completing these documents amounts to 20 percent of a worker's time. This will make it possible to devote greater attention to those problems concerned with protecting the grain and controlling the efficiency of equipment operation.

The introduction of a grain accounting system according to basic bulk brings all of the accounts at grain receiving enterprises closer to the methods employed at industrial enterprises, particularly at grain processing enterprises.

The Scientific-Technical Council of the USSR Ministry of Procurements has approved the work of VNIIZ and the Administration of Accounting, Reporting and Control of the ministry, with regard to the development and introduction of the new grain accounting system and has recommended that its introduction be continued.

Taking this recommendation into account, an instruction was issued for the 1981-1982 period calling for grain accounting according to basic bulk to be continued at nine enterprises, of which three are located in the KaSSR and one each in the BSSR, LaSSR, ESSR, GSSR, UzSSR and AzSSR. The enterprises singled out for introducing the new grain accounting system must be equipped with an Iskra-534 EBM or an Iskra-2302 EFBM machine. At the indicated enterprises and prior to the initial deliveries of grain from the 1981 harvest, an inventory should be taken of the grain in storage and the remaining amounts should be recalculated and credited according to basic bulk, in addition to its physical bulk (weight).

In order to ensure that the grain accounting system according to basic bulk is introduced in a planned manner, the republic ministries of procurements should ideally develop and approve a plan for introducing the grain accounting system according to basic bulk, one which has been coordinated with the present and future availability of Iskra type EBM machines.

In order to ensure the introduction of the new grain accounting system, it will be necessary to use the Nairi EBM machines presently available in the republic, for providing group services to enterprises for the processing of grain accounting documents according to basic bulk. Programs for their use have been developed.

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AGRO-ECONOMICS AND ORGANIZATION

OBSTACLES TO SUBSIDIARY FARM DEVELOPMENT IN LIGHT INDUSTRY

Minsk SEL'SKAYA GAZETA in Russian 21 May 81 p 2

[Article by P. Zalesskiy: "Initial Obstacles"]

[Text] The MPOShT [Mogilevskoye proizvodstvennoye ob"yedineniye shelkovykh tkaney; Mogilev Production Association for Silk Fabrics] truly believes in the use of a subsidiary farm. A type of agricultural department has commenced operations here. This year it will supply the meat, potatoes and a portion of the vegetables required by all of its dining halls, kindergartens, nurseries and dispensaries.

The association's collective has been allotted 134 hectares of land, with 108 hectares of this amount being arable land. Last year, construction work was completed here on storehouses for grain, potatoes, fruit and vegetables, representing an overall capacity of approximately 2,000 tons and a pigsty for 1,200 head, which has already received its first batch of swine for fattening. Still, the meat from one pigsty does not go very far with regard to fully satisfying the requirments of an obshchpit [public eating establishment]. Taking its potential into account, the association decided to build another swine raising complex having a completed cycle for 1,000 head, after which there would no longer be a requirement for procuring young pigs on the side.

"Nevertheless, the principal source for producing food products for the obshchpit is the allotted sector of land" stated the Deputy General Director of MPOShT, Arkadiy Aleksandrovich Motiyevich, "and this is why we are devoting a great amount of effort towards ensuring the efficient use of this land."

This is borne out by actions already taken. The tract of land was allotted in June of last year. But it was in the spring, at a time when the question of turning 134 hectares of land over to the association was still being discussed, that the farm began gathering up the rocks and carrying out other types of soil improvement work. In particular, agrotechnical measures were carried out on an extensive scale after agronomist Viktor Vladimirovich Spat was enlisted and assigned to the association's table of organization.

In the early autumn, 250 tons of poultry excrement procured from a poultry factory were applied to the tract. Rye for grain was sown here for the purpose of feeding to the swine. The remaining areas were plowed up early in the autumn. Barley was sown on 48 hectares in the spring and on 35 hectares -- tubers were planted. But if fertilizers are not applied, the land will not produce a good return. But where could these fertilizers be obtained? Fortunately, supporting farms and poultry factories provided assistance.

The supporting Sovkhoz imeni Smolyachkov in Bykhovskiy Rayon furnished mineral fertilizers from its own supplies. Business-like contacts have been maintained for a long period of time between this farm and MPOShT.

Concern has been displayed at the association for the liming of acid soils. An estimate was composed in advance and an agreement concluded with raysel'khozkhimiya calling for this work to be carried out on 60 hectares. Regrassing work was conducted in the spring on 25 hectares of haying land. Perennial grass seed was procured for this purpose last year.

I anticipate a question: if long-horned cattle are not being maintained on the subsidiary farm, why is it necessary to engage in haymaking? This obviously represents a thrifty approach on the part of the management of the MPOShT with regard to solving the established task. With the very first steps taken towards developing the subsidiary farm, and attempt has been made here to utilize local reserves so as not to be dependent upon the state. Since the decision was made to feed the swine only internally produced feeds, use must necessarily be made of the haying lands. The cut grasses, following processing into grass meal on an AVM of the supporting Sovkhoz imeni Smolyachkov, will be included in the rations for the animals.

In short, the management of the association is doing everything possible to solve the tasks assigned by the party for improving the supply of food goods for the population.

And how is the problem of creating subsidiary farms at other enterprises of the Ministry of the Light Industry being solved? Back in April 1979, the ministry's board resolved to create 12 of them. They are in operation at a number of enterprises -- Lida Shoe Factory, Zhlobin Artificial Fur Factory, Orsha Flax Combine, Dobrush Porcelain Plant and in a number of other areas. It bears mentioning that these farms are producing very little output; however, if their operations were organized better, they would be able to increase their production of meat and vegetables.

"At first, the creation of subsidiary farms was restrained by the refusal by the local organs of government to allocate the required tracts of land" stated the Deputy Minister of the Light Industry G. N. Koba, "This problem no longer exists, but instead another difficulty has arisen. In the majority of instances, the tracts of land allocated by the oblast executive committees are located at great distances -- 40-50 kilometers -- from the city -- and they are swampy. Our enterprises are unable to develop them or deliver people there and they lack transport facilities. The ministry receives only 2-3 autobuses each year and only a small number of trucks and tractors."

Actually, the authorities in Zhlobinskiy, Lidskiy and some other rayons executive committees still do not understand the need for creating agricultural departments attached to industrial enterprises. For example, the first of the above allocated a tract of swampy land for an artificial fur factory and the enterprise had to refuse it. The Lidskiy Rayon Executive Committee has still not solved the problem of making a 100 hectare tract of land available for a shoe factor, despite the fact that the request was submitted in October of last year. For the moment, the factory must content itself with a tract of only 0.86 hectares. How is it possible to even discuss participation by these enterprises in aclving the food problem if they lack the most important resource -- land -- without which the development of a subsidiary farm is unthinkable?

The Ministry of Light Industry is not displaying proper initiative in this work. Its workers possess a very poor knowledge of the status of affairs in the various areas and they lack organizational ability. The ministry's plans for 1981 made no provision for working capital for the creation of agricultural departments attached to industrial enterprises and, as a result, some leaders had to go begging -- a plow from one farm, farmyard manure from another and young pigs from a third one. Quite often this was accomplished based upon their "word of honor."

These and other problems associated with the development of subsidiary farms must be resolved on an urgent basis and through the joint efforts of the rayon executive committees and the enterprises of the Ministry of the Light Industry for the BSSR.

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LIVESTOCK

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ROLE OF ANIMAL HUSBANDRY IN FOODSTUFFS PROGRAM

Moscow ZHIVOTNOVODSTVO in Russian No 2, Feb 81 pp 2-6

[Article by L. Kuznetsov, USSR deputy minister of agriculture, A. Kalashnikov, academician, All-Union Academy of Agricultural Sciences: "The Role of Animal Husbandry in the Solution of the Foodstuffs Program"]

> [Text] "To provide all-out development of the agroindustrial, foodstuff complex and proportional and balanced growth of agriculture and the sectors of industry serving it and of the food industry as well as production operations connected with the procurement, storage, transportation and processing of agricultural products. To lay special stress on the solution of tasks relating to growth of grain and fodder production, development of animal husbandry, preservation of agricultural products and bringing them in the best possible condition to the consumer. To speed up the conversion of agricultural production to an industrial basis and progressive technologies."
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> From "Basic Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990."

In the plan of the CPSU Central Committee for the 26th Party Congress "Basic Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990" much attention is devoted to the development of a foodstuffs program whose purpose it is to provide for the entire population high-quality and diversified food products.

Successful realization of the foodstuffs program will largely depend on increased production of milk, meat, eggs and other animal-husbandry products.

Implementation of measures relating to agricultural development designated by the March (1965) Plenum of the CPSU Central Committee led to a significant growth of production of animal-husbandry products in the country. Thus, in comparison with 1965, milk production in 1979 increased 28.5 percent, meat—54 percent and eggs—2.2-fold. Their per-capita consumption has also grown. In 1979 per-capita milk consumption amounted to 319 kg, that of meat—58 kg and of eggs—233 each.

The USSR occupies a leading place in the world in the production of animal-husbandry products and first place with respect to milk. At the present time, yearly production of milk for all the countries of the world is 420 million tons; of this amount the USSR share is 94 million tons, that of the United States—55 million tons, France—32 million tons, the FRG—23 million tons and Great Britain—15 million tons.

In recent years, the material level of workers has improved, and demand for food products has increased; it is therefore necessary to produce considerably more animal-husbandry products to provide the population with nutrition based on scientifically valid norms. In the USSR, the following physiological norm for per-capita consumption of animal-husbandry products has been adopted: milk—405 kg, meat—78 kg and eggs—292 each.

The Basic Directions of USSR Economic and Social Development for 1980-1985 and the Period to 1990 definitely determined the production volume of animal-husbandry products. It is planned in the 11th Five-Year Plan to raise average yearly production of meat to 17-17.5 million tons, of milk—to 97-99 million tons, eggs—no less than 72 billion each and wool—to 470,000-480,000 tons. The attainment of these indicators will markedly raise the per-capita consumption level of animal-husbandry products.

Increased production of meat, milk, eggs, wool and other animal-husbandry products should be attained on the basis of intensification of sectors, principally by increasing the productivity of livestock and poultry, a certain growth in the number of head, organization of full-value feeding of animals by means of a stronger feed base, improvement of breeding work, higher labor productivity and introduction of progressive technologies for the maintenance of animals.

Adequate possibilities exist for this. Scientists together with specialists and leading animal-husbandry workers have done tremendous work relating to the transformation of local into pedigree livestock. In the years of the Soviet power 80 breeds of agricultural animals were developed in the country, including 13 strains of cattle, 16 of pigs, 28 of sheep and goats and 11 of horses. At the present time, 99 percent of the cattle and sheep are pedigreed. One hundred percent of the pigs are pedigreed.

Our breeds have a high genetic potential. They can successfully compete with foreign breeds. This is borne out by the experience of the better farms and of leaders of production. Take, for example, milk production. The 9th Stud Farm in Permskaya Oblast and the Lesnoye Breeding Farm in Leningrad Oblast achieved 6,000 kg milk yields. A considerable number of breeding farms have 5,000 kg milk yields.

Domestic breeds include outstanding cows that are recordmakers. Thus, the cow Volga 3790 of the black-speckled breed from Rossia Sovkhoz in Chelyabinskaya Oblast in 305 days of 3rd lactation gave 17,571 kg of milk with a a 4.2-percent fat content. The cow Ryabushka 1413 of the Siemental breed from Kolos Breeding Farm in Kiev Oblast produced in 305 days of 4th lactation 14,541 kg of milk with a 3.98-percent fat content. On breeding farms, for the most party in the Ukraine, there are to be found a significant number of cows of the Siemental breed with a milk yield in excess of 10,000 kg of milk for a lactation period.

For the last 10 years, the average milk yield per cow on the country's kolkhozes and sovkhozes has been at the level of 2,300-2,400 kg per year. A comparison of these indicators with indicators of leading farms attests to the unsatisfactory use of existing cows and to large reserves for increasing milk production.

The existence of highly productive breeds of cattle, pigs, sheep and poultry provides the possibility of successfully solving the problem relative to increasing the production of meat of all kinds. The following structure of meat production is planned for the 11th Five-Year Plan: beef--43 percent, pork--33 percent, mutton--6 percent, poultry flesh--16 percent and other meats--2 percent.

Since the beginning of the seventies, animal husbandry in our country has been shifting to an industrial basis. The need for such a shift is dictated by the requirements of scientific-technical progress in all sectors of the national economy. Industrial methods in animal husbandry provide for increased labor productivity of workers and help raise the productivity of the animals. Agricultural science and advanced practice have developed efficient technologies of industrial production of animal-husbandry products according to the country's zones that are being successfully introduced into production at many farms.

The biggest relative share in the meat balance is that of beef. Its production will be increased primarily through intensification of rearing and fattening young cattle of dairy and combined breeds on the basis of bolstering of specialized enterprises as well as fattening of culled grown head and the development of meat stockraising.

The increase in delivery weight should be accompanied by reduced rearing and fattening periods; it is essential to have a weight of 400-450 kg at the age of 16-18 months instead of 20-25 months at the present time. Intensification of fattening will make it possible to reduce by at least one-third feed outlays per product unit.

An example of a highly efficient industrial enterprise for the production of beef is to be found in the Mir Fattening Complex in Belorussian SSR. In 1979, there were reared and fattened here 10,771 head of cattle with a total live weight of 4,989 tons. The average live weight of one head sold to the state was 463 kg. The average daily weight increase during fattening was 1,200 grams. A total of 5.4 quintals of feed units and 2.4 man-hours of labor were expended on one quintal of weight gain. The cost of one quintal of weight gain is 99.5 rubles.

The same high indicators in fattening of young cattle stock are to be found at Yumatovskiy Complex in Bashkirskaya ASSR. At the Mtsenskiy Complex in Orlovskaya Oblast husks--up to 50 percent of the feeding ration--are used in large quantities in fattening. Daily live-weight gain reaches one kilogram. A total of 3.7 man-hours of labor is spent on one quintal of weight increase.

In addition to expanding the network of fattening farms, it is necessary to establish on large kolkhozes and sovkhozes specialized animal-husbandry farms for the rearing and fattening of super-upkeep young stock and to introduce an industrial technology on them. The fattening of young stock at fattening areas should be more widely used.

The technology for fattening of young stock has been developed rather well. Its improvement during the 11th and 12th Five-Year Plans should be achieved primarily by raising the general level and biological soundness of fattening. There should be introduced a type of feeding for cattle being fattened in which coarse and succulent fodders predominate and concentrates are optimally used within the limits of 30 percent. In beet- and potatogrowing regions, wide use should be made of fattening with wastes of the food industry (husks, distillery waste).

In recent years, there has been an unjustifiable curtailment of fattening of cattle on pasturages; this has led to the deterioration in the use of considerable areas of natural pasturages. During the 11th and 12th Five-Year Plans, it would be useful to concentrate more attention on organizing fattening of young stock and grown head, subject to culling, especially in the regions of Kazakhstan, North Caucasus, Urals, Volga region, Western and Eastern Siberia. Expansion of fattening of cattle on pasturages will help reduce the cost and raise the quality of beef. Carrying out of final fattening of animals after they have been on pasturages will make it possible to improve their nutritional state and condition.

Major organizational and economic measures should be implemented to speed up the development of specialized beef stockraising. Good conditions for this are possessed by the steppe regions of Kazakhstan, the foothill and mountain regions of Central Asia, the Transcaucasus and a number of krays and oblasts of the RSFSR.

Agricultural enterprises possess good breeds of beef cattle that are both of domestic and foreign origin. In recent years, considerable work has been done in improving existing breeds and developing new types and lines of beef cattle. Accelerated development of beef stockraising requires an increase of capital investment for bolstering existing and creating new farms in the different zones of the country. It is necessary to carry out specialization of farms and entire rayons for the breeding of beef breeds of cattle, to organize in them mass crossbreeding of local cattle with bulls of beef breeds and to develop and introduce economic measures stimulating the development of the sector.

Increased production will be achieved by converting the sector on kolkhozes and sovkhozes to flow-shop technology, creating new large pig-raising complexes and specialized pig-raising sovkhozes near large cities and industrial centers, restoring pig-raising farms on kolkhozes and sovkhozes and developing on an all-out scale pig-raising in the individual sector.

In 1979, 26 percent of the pork was produced at pig-raising industrial complexes. On them, 6.3 feed units and 8.2 man-hours of labor were spent on the average in achieving a one-kilogram gain in live weight, which is significantly less compared to the run-of-the-mill pig-raising farms.

The best pig-raising industrial complexes in the country are the Il'inogorskiy in Gor'kovskaya Oblast, the Luzinskiy in Omskaya Oblast, the Kuznetsovskiy in Moscow Oblast, imeni 60-Letiye BSSR in Minskaya Oblast, imeni 50-Letiye SSSR in Kalininskaya Oblast and others; these have achieved outstanding work results. For example, in 1979, the Il'inogorskiy Complex fattened that year 216,000 pigs; the average daily weight gain from fattening amounted to 635 grams; 4.2 quintals of feed units and 2.3 man-hours of labor were spent on one quintal of weight increase; the cost of the one-quintal gain was 84 rubles.

The development of pig raising in the immediate future will largely depend on further improvement of breeding work and the introduction of the most efficient methods of raising pigs developed by science. In this connection, wide-scale introduction into practice of crossbreeding and hybridization is of great importance.

With thoroughbred breeding, pig breeds existing in our country now yield an average daily weight gain of 600-650 grams with expenditure of 4.2-4.6 feed units per kilogram of weight gain. At the same time, with crossbreeding and hybridization, survival of piglets increases 5-8 percent; the fattening period is reduced by 10-12 percent and outlays of feed are cut by 0.3-0.5 feed unit per kilogram of weight gain.

The USSR Ministry of Agriculture and the All-Union Academy of Agricultural Sciences developed measures for breeding work during 1980-1990. They provide for the development of new breeds, types and lines of pigs as well as the wide-scale use of hybridization in pig-raising. There is planned the creation of 12 large centers for the rearing of hybrid pigs for industrial complexes and commodity farms.

Pork production in the 11th and 12th Five-Year Plans at the large industrial complexes will be based primarily on concentrated feeds; consequently, increased production of full-allowance high-quality mixed feeds is an obligatory condition of intensification of the sector. At small and medium-size animal-husbandry farms, a significant share in the diets of pigs will consist of potatoes, wastes of vegetable growing and green fodders. In feeding pigs, it is necessary to use more effectively food wastes and wastes of the dairy, food and other sectors of industry.

Sheep raising is of major significance in the successful realization of the foodstuffs program. It provides high-quality meat--mutton, fine, semifine and coarse wool, sheepskin and lambskin. Up to now, mechanization of production process has been introduced less in sheep raising than in the other sectors of animal husbandry, and the achievements of scientific-technical progress are inadequately used. The development of the sector in a number of large sheep-raising zones still continues to depend on weather conditions.

It is expected that mutton production will be increased on the basis of improved regular fattening and pasturage fattening, the live weight of turned-over sheep to be increased from 35-37 to 42-45 kg and the number of ewes per 100 bearing sheep from 86-88 to 95-100.

The intensification of sheep raising has to be accompanied by the improved use of natural pasturages, the creation of irrigated cultivated hayfields and pastures and comprehensively mechanized animal-husbandry farms and fattening areas, the full provision of all head with feeds, including insurance stocks, and upgrading of full-value feeding.

Further improvement of breeding and productive qualities of the sheep of existing breeds and also the development of new breeds, types and lines will be aimed at the production of 45-50 kg of meat per bearing sheep and 2.5-3 kg of washed wool per sheep. For the purpose of improving the quality of wool, the planning of wool production and procurement on the basis of indicators of washed fiber in the recorded weight.

Poultry flesh is expected to be increased from 13 to 16 percent in the country's meat balance. Production growth of poultry flesh in all zones of the country will be primarily assured by increases in the number of poultry whose flesh is eaten and rearing of broilers for meat and by the construction of poultry factories for meat purpose near large cities and industrial centers and also by the expansion and modernization of existing poultry-raising enterprises.

Growth in the production of eggs on farms of the poultry industry is essentially planned on the basis of the reequipment and expansion of existing poultry-raising enterprises. On kolkhozes and sovkhozes that do not specialize in poultry raising, there should be reestablished and recreated utility animal-husbandry farms for the satisfaction of internal needs.

Horse breeding, reindeer breeding and rabbit breeding provide valuable meat for feeding the population. Production volume of horse, reinder and rabbit meat is relatively small (300,000-400,000 tons of meat in slaughtered weight), but it is of significant value in feeding the population of a number of the country's zones.

Horse-meat production is to receive its biggest development in Kazakh SSR, Kirghiz SSR, Uzbek SSR, Yakutskaya ASSR, Buryatskaya ASSR and Kalmytskaya ASSR; in this connection the best indicators are being attained in regions where horse herds are maintained. According to the data of the Kazakh SSR Ministry of Agriculture, the cost of one quintal of horse meat for the republic as a whole was 60 rubles in 1979.

Reindeer breeding in regions of the Far North occupies a special place, since 22 nationalities of this area are connected with it. In the autonomous okrugs of Kamchatskaya and Magadanskaya oblasts and Krasnoyarskiy Kray, reindeer breeding is the chief source of meat supply. It is expected that the number of reindeer will be increased in the future.

The foodstuffs program also includes the development of pond fish breeding and beekeeping on kolkhozes and sovkhozes. It is planned to increase in 1985 the production of fish on kolkhozes and sovkhozes to 84,000 tons and honey for marketing to 110,000-115,000 tons.

A very important part of the foodstuffs program is increased production of milk. By the end of 1985, its amount will exceed 100 million tons,with an average yearly production of 97-99 million tons.

The farms of all categories in all of the country's zones will engage in dairy cattle breeding. The development of the sector in different zones is based on the need for full provision of the need of the population for whole milk and dairy products primarily from their production at places of use. The development of dairy cattle breeding for the production of butter and cheeses will be carried out in the traditional regions of buttermaking and cheesemaking that possess adequate areas of natural hayfields and pasturages—the Baltic republic, Belorussia, the RSFSR Nonchernozem Zone, Siberia, the western oblasts of Ukrainian SSR and so on.

A basic condition of increased production of milk and growth of its profitability is increased productivity of dairy cattle. Such an approach to the development of the sector will make it possible to make the most effective use of animals, fodder, production buildings and the labor of animal-husbandry workers.

A significant resource for the boosting of gross milk production lies in increasing the relative share of specialized dairy breeds. At the present time, for example, the average milk yield of cows of the black-speckled breed, other conditions being equal, is 200 kg higher than the productivity level of cows of other breeds. With improved feeding, this difference is bound to grow. Only by increasing the relative share of this breed from the 18.7 percent existing at the present time to 30-35 percent in the future will it be possible to ensure the growth of the gross milk yield by 1.5-2 million tons. There is a need for sharply improving breeding work with promising domestic breeds of dairy cattle--Kholmogor, Yaroslavl' and others.

Available genetic resources should be more widely used in improving pedigree dairy animal husbandry, expanding the pedigree base and accelerating the creation of highly productive herds of dairy cattle suitable for an industrial technology. It would be advisable to use for this purpose Holstein-Frisian cattle for improving the black-speckled and Simmental breeds and the Anglerskiy [Angus (?)] for crossing with the Red Steppe breed and to expand the zone of growing Ayrshire cattle both for crossbreeding and also for thoroughbred breeding.

The intensification of dairy animal husbandry is indissolubly connected with its conversion to an industrial basis. Considerable work has been done in the country in this direction. The best industrial animal-husbandry farms and complexes have high productivity of cows with a sharp curtailment of labor outlays.

At Kolkhoz imeni Lenin in Novomoskovskiy Rayon of Tul'skaya Oblast, in 1980, with loose-housing and pen maintenance, 1,000 cows produced an average milk yield of 5,010 kg with labor expenditure of 1.3 man-hours and a cost of 14 rubles 50 kopecks for one quintal of milk. At 9 May Kolkhoz in Estonian SSR, 1345 cows with the stall-barn system of maintenance produced more than 5,000 kg of milk; labor outlays for one quintal of production amounted to 2.4 man-hours.

But many dairy complexes do not attain projected capacity; this is due to an inadequately developed feed base, unsatisfactory growing of breeding heifers, defects in cattle selection according to level of productivity and suitability for an industrial technology, low quality of machines and equipment and also weak training of specialists and animal-husbandry workers for work under the new conditions.

The July (1978) Plenum of the CPSU Central Committee set a goal of achieving an average milk yield of cows of 3,000 kg on the country's kolkhozes and sovkhozes and, in regions of developed dairy animal-husbandry, of reaching the level of 4,000-5,000 kg. Such a level is possible with high-quality feeds: 38-40 quintals of feed units per year per cow for producing 3,000-kg milk yields and 48-55 quintals of feed units for achieving 4,000-kg yields.

With the introduction of industrial methods of conducting dairy animal husbandry, milk production technology in the 11th and 12th Five-Year Plans should be improved along the following directions:

for the feeding of cows to make broader use of diets rich in high-quality coarse and succulent fodders with optimal expenditure of concentrates (within the limits of 250-350 grams per kilogram of milk). The improved nutritional content in the feed of dairy cattle comes from inclusion in their diet of protein-vitamin and mineral supplements, biologically active substances in quantities fully satisfying the requirements of dairy cattle;

for the purpose of improving feed utilization and reducing labor outlays, wide use should be made of feed mixtures in their distribution, and special feed shops should exist on industrial animal-husbandry farms for their fabrication;

depending on concrete operating conditions, both the stall-barn system and the loose-housing system are used in accommodation of the cows.

In the summer period, the pasturing, stall-camp and stall systems of keeping cattle will be used on dairy farms and complexes.

Much milk is underproduced because of the high level of barrenness and the low output of the young animals. In the past 5 years, calf output per 100 cows on many farms has not exceeded 80 percent. Defects in the reproduction system result in annual losses of 2.5-3- million tons of milk.

For the purpose of improving reproduction and increasing the productivity of cattle, the feeding of bearing-cow stock should be of higher nutritional value, the organization of artificial insemination should be improved, and the shop system of operation should be more widely introduced.

The transition of all sectors of animal husbandry to an industrial basis should be primarily done through expansion and modernization of existing animal-husbandry farms and also through the construction of new ones. The proposals developed by scientific institutions and advanced practice relating to modernization of dairy farms will make it possible to introduce the flow-shop technology of milk production on ordinary farms.

At Bolshevik Kolkhoz in Novosibirskaya Oblast, the dairy farm following modernization was enlarged from 800 to 1,400 cows, while the use of progressive technology made it possible to increase milk yield from 3,298 to 3,711 kg and reduce labor outlays from 4.9 to 2.8 man-hours for the production of one quintal of milk.

At this facility, the farm for fattening of young cattle stock was modernized. As a result, the latter's operational indicators sharply improved. Whereas prior to modernization, labor outlays per quintal of weight gain were 14 man-hours, after modernization, the figure was 4 man-hours, that is, labor productivity increased 3.5-fold. With modernization, comprehensive mechanization of production processes and a new improved fattening technology were introduced.

For the purpose of fulfilling the prescribed program for increasing the production of animal-husbandry products, the total feed requirement for 1985 is set at 487.6 million tons of feed units and 81.8 million tons of digestible protein. According to estimates of the USSR Ministry of Agriculture and the All-Union Academy of Agricultural Sciences, the organization of full-value feeding for all types of animals will require the procurement in 1985 (in millions of tons): hay--more than 100, haylage--about 80, silage--270-275, root crops--60, potatoes--30, grass flour--10 and green fodder--690.

There is a need for a sharp increase in the quality of fodder and a reduction in the loss of nutrients in their preparation and storage. Science has developed many technologies for the production of high-quality feeds. They must universally be introduced into practice. Special attention should be paid to the need for using preservatives in ensilage of fodder. In ensiling usually 25-30 percent of the nutrients contained in the green plants are lost. The use of preservatives reduces these losses by 10-12 percent.

The satisfaction of animal husbandry's protein needs must be attained in various ways. First of all, through the use of progressive technologies for the securing of basic fodders--hay, silage, haylage, increasing the production of high-protein feeds from alfalfa, clover and rape, expanding sowings of legume crops--soy beans, beans and the like, improving the use of carbamide and other chemical additives.

In successful implementation of the animal-husbandry developmental program, major importance is to be given to raising the skills of personnel. Studies of the SibNIPTIZh [Siberian Scientific-Research Planning and Technological Institute of Animal Husbandry (?)] have established that milkmaids that have not sufficiently mastered the machine-milking technique obtain in the milking machines only 83-87 percent of milk available at the time of milking, while highly skilled masters of machine milking get as much as 96 percent. This is why it is important to be constantly concerned with raising the skill level of animal-husbandry personnel, especially milkmaids.

Responsible tasks face zootechnical-science personnel. Much work has to be done on developing new and improving existing breeds of agricultural animals with account being taken of the requirements of industrial technology. It is necessary to expand the joint researches of scientists of the scientific institutions of the USSR Ministry of Agriculture, the All-Union Academy of Agricultural Sciences and a number of industrial ministries and departments. These comprehensive studies ought to include elaboration of questions relating to the improvement of the technologies of industrial production of animal-husbandry products of high quality, their processing, storage and availability to the consumer.

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